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(54) CONE-BEARING BOX COMPRISING A REMOVABLE STRUCTURE

(57) The present invention is directed to device for transporting ice cream cones in vertical position, comprising: an external container having dimensions such as to contain entirely and in vertical position one or more cones filled with ice cream; at least one internal structure that is extractable from the external container by using a handle, said internal structure comprising at least one

horizontal partition, comprising at least one hole for inserting an ice cream cone.

The invention is further directed to a method for carrying cones filled with ice cream, which method comprises the following steps: inserting at least one cone filled with ice cream in an internal structure; inserting at least one internal structure into an external container.

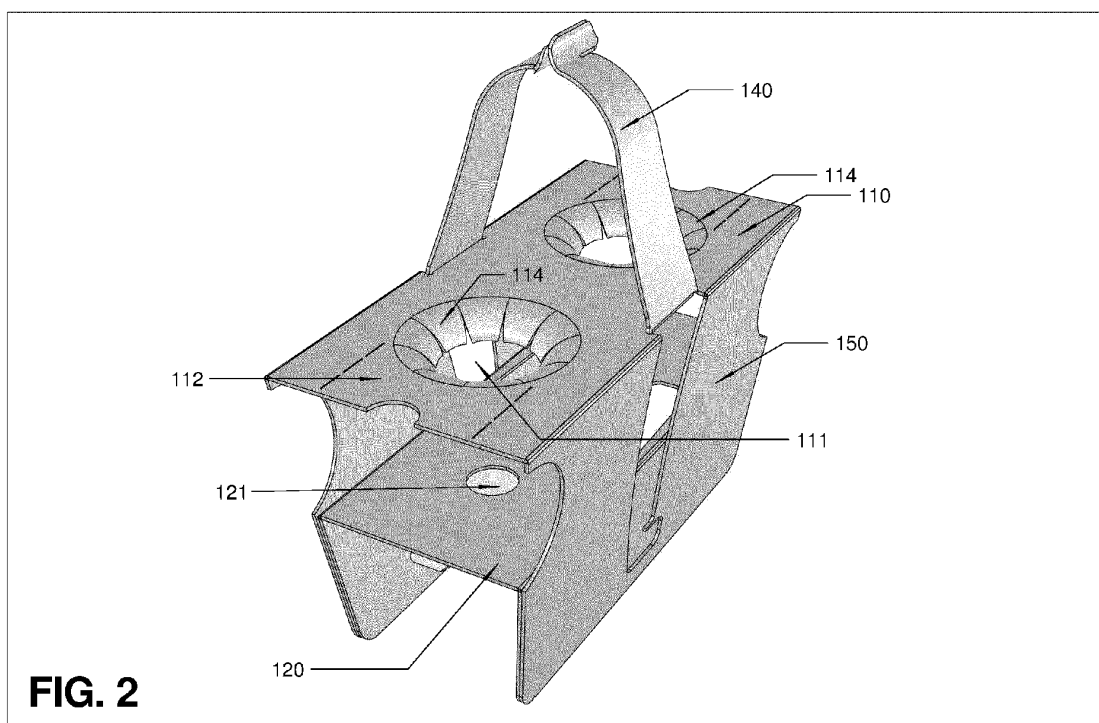


FIG. 2

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Description

Field of the invention

[0001] The present invention is directed to a device for transporting ice cream cones in vertical position. This device includes an external container, and a rigid removable structure in which the cones are housed.

Background of the invention

[0002] The consumption of ice cream cones has been increasing all over the world. The preferred form of consumption is that of the cone. However, the difficulties of transporting a significant number of cones limits the spread of the consumption of ice cream cones away from the ice cream parlour that sold it.

[0003] Between 1910 and 1935 several patent applications were filed for ice cream cone transport devices, but the proposed devices are imperfect and have limitations of use; therefore, such devices have never been widespread and to date remains the need to provide an efficient and versatile system for the transport of cones already filled with ice cream.

[0004] US 1338192 discloses a foldable device to carry ice cream, preferably in cardboard, including a central body with a handle and two supports, on opposite sides of the central body, with one or more holes for housing ice cream cones, which are thus substantially transported suspended, supporting the device from the handle. This device cannot be placed even temporarily when filled with one or more ice cream cones. US 1140540 discloses a foldable device to carry ice cream cones, preferably in cardboard. Before being assembled, this device includes a central portion having a plurality of openings and four lateral portions, arranged substantially like a cross. When the device is assembled, by folding, the central portion forms the base of the device, in whose holes are housed the ice cream cones, while the side portions are closed over the base. As in the device of US 1338192, the ice cream cones are therefore transported suspended, protruding from the base. Such transport devices in which the cones protrude from the base are disadvantageous, as it is not possible to place them on a surface; in addition, the use of such devices is limited to cones whose greatest radius is not less than the radius of the openings (for example, the so-called mini-cones, which are currently available).

[0005] US 1628718 discloses a foldable container, to carry ice cream cones, having a base and without a cover. The ice cream cones are entirely contained in the container, held in place through a horizontal partition close to the base of the container, with one or more holes suitable for receiving the tips of the cones. This container clearly has a poor stability, as a minimum inclination of the device would easily drop the cones stopped at a height close to the tip.

[0006] US 1674209 discloses a rigid container for the

transport of ice cream cones. The cones are transported being entirely contained in the container, inserted through a horizontal partition that keeps them suspended. The partition is placed here at the top of the box, so that the cone inserted from above is stopped by means of this partition at a cone level close to ice cream. Although the device is better than the device of US 1628718, the presence of a single partition still makes the transport unstable. In addition, the ice cream cone stuck in a higher portion is more difficult to extract without touching the ice cream.

[0007] Recently, EP 2 979 986 proposed a device for the transport of ice cream cones in vertical position. This device shall comprise a container, in which one or more ice cream cones may be fully enclosed and held upright, and one or more removable supports, resting on a transverse partition of the container; These supports each have at least one hole and at least two folding wings on the sides, to handle the ice cream cones and facilitate their insertion and removal from the container. However, this device still has difficulty in the extraction of cones, as it is not always easy to access the supports without getting your fingers covered with ice cream.

[0008] There is therefore still a need for a device for the transport of ice cream cones that allows not only easy transport of the same, but also their easy extraction.

Summary of the invention

[0009] The present invention is directed to a device for the transport of ice cream cones in vertical position, comprising: i) an external container of dimensions such that one or more cones filled with ice cream are entirely and vertically contained; ii) an internal structure which can be removed from the external container by means of a handle, said internal structure comprising at least one horizontal partition comprising at least one hole for the insertion of an ice cream cone. The invention is also directed to a method for the transport of ice cream cones, which method includes the following steps: a) inserting at least one ice cream cone in an internal structure; b) inserting at least one internal structure in an external container; c) transporting the cone-bearing box to the desired location.

Brief description of the figures

[0010]

Figure 1: top view of a cutting die of the internal cone-bearing structure according to a first embodiment of the invention.

Figure 2: perspective view of the mounted and ready-to-use cutting die of figure 1.

Figure 3: top view of a cutting die of an internal cone-bearing structure according to a second embodiment of the invention.

Figure 4: perspective view of the cutting die of figure 3 mounted and ready for use.

Figure 5: top view of a cutting die of an internal cone-bearing structure according to a third embodiment of the invention.

Figure 6: perspective view of the cutting die of figure 5 mounted and ready to use.

Figure 7: top view of a cutting die of an external cone-bearing box according to a first embodiment of the invention.

Figure 8: perspective view of the cutting die of figure 7 mounted in open and closed position.

Figure 9: top view of a cutting die of an external cone-bearing box according to a second embodiment of the invention.

Figure 10: perspective view of the cutting die of figure 9 mounted in open and closed position.

Figure 11 shows the method of use of the cone-bearing box and the internal structure associated with it.

Figure 12: cross section view of the cone-bearing box mounted and containing two ice cream cones.

Figure 13: perspective view of cone-bearing box of figure 12.

Figure 14: opening of the box of figure 13 and extraction of the internal structure.

Figure 15: a detail of the internal structure containing the cones.

Detailed description of the invention

[0011] The present invention is directed to a cone-bearing box comprising an internal removable structure, i.e. a structure that can be pulled out of the box, and capable of housing the ice cream cones in a vertical position. The removable internal structure includes a handle, or more generally a grip point, for easy extraction of the box. The internal structure is characterized by the fact of not having lateral impediments that hinder the extraction of the cones. In this way, once the internal structure is removed from the cone box, it will be possible for the user to easily grip the cone and extract it from the internal structure without getting dirty hands with ice cream.

[0012] Figures 1 and 2 show a first embodiment of the invention. Figure 1 shows a cutting die (100) from which to start for assembling the internal structure. The cutting die (100) comprises two holes (111) in the upper partition (110) and two holes (121) in the lower partition (120). In a preferred embodiment, the cutting die also includes a central support (130) that in the assembly of the structure is raised to give greater solidity to the same. The extraction handle of the structure is present in the cutting die in two halves (140), each half being present on each of the two side partitions. During assembly, the two halves of the handle lift up and join together at the top as shown in figure 2. In a preferred embodiment, the cutting die also includes an extraction tab (112) at each hole (111). These tabs can be detached at the moment of cone extraction, allowing easier extraction. In fact, it may happen that the cone makes friction with the walls of the hole and

the upward extraction is not easy. By removing the extraction tab, it is then possible to remove the cone with a horizontal movement instead of a vertical one.

[0013] In a preferred embodiment, the at least one hole (111) present in the upper partition (110) is delimited by foldable tabs (114), arranged radially along the entire circumference of the hole. Preferably, these tabs bend downwards when the ice cream cone is inserted into the hole, adapting to the diameter of the cone inserted, supporting the cone and keeping it stationary. The presence of these tabs along the circumference of the hole allows therefore to accommodate and maintain vertical ice cream cones of different sizes.

[0014] Figures 3 and 4 show a second embodiment in which the handle (340) is separated and is mounted by interlocking on the internal structure forming a handle above the upper partition (310).

[0015] Figures 5 and 6 show a further variation in the way of realisation of the invention, in which the handle (540) is separated as in the case of Figures 3 and 4, but instead of engaging laterally, is wedged at the centre of the upper horizontal partition (510). It has to be noted that according to the invention, the term "handle" is to be interpreted in its broadest meaning, i.e. a part that is designed to be grasped by a hand.

[0016] As shown in Figures 1, 3 and 5, the holes in the lower partition (121; 321; 521) are preferably smaller in diameter than the holes in the upper partition (111; 311; 511). In addition, preferably, the height of these partitions is such that, when an ice cream cone is housed in the container, a lower portion of the ice cream cone, preferably close to the tip, crosses the hole of the lower partition, while an upper portion of the cone, preferably close to ice cream, cross the hole of the upper partition.

[0017] In addition, lateral partitions (150; 350; 550) preferably do not exceed the upper horizontal partitions in height. In this way, the extraction of the ice cream cones is not hindered by the side partitions.

[0018] Figures 1-6 show three different embodiments of internal structures according to the invention in which the structure itself is suitable for the transport of two cones. However, with the appropriate modifications, it is possible to realize the present invention with an internal structure suitable to carry a higher or lower number of cones. It is therefore possible the use of both an internal structure for a single cone and an internal structure for 4, 6 or 8 cones.

[0019] Figures 7 and 9 show two different cutting dies for the assembly of an external cone-bearing box according to two different embodiments of the invention. The cutting die (760; 960) has two points (761; 961) for the connection of a fixing system (762; 962) for a refrigerant. In general, they can be present in an external box from one to eight coolant fixing points, depending on the size of the box. A non-exhaustive example of refrigerant is gel ice. Further examples of coolant materials suitable for use in or in conjunction with the device of this invention are: dry ice, spray ice and instant ice bags (gel packs).

Figures 8 and 10 show the external boxes mounted in the open and closed position.

[0020] The method of use of the present invention is shown in Figure 11 with regard to the insertion phase of ice cream cones in the internal structure and subsequent insertion of the internal structure in the external box. Figure 12 shows a section view of the ready-to-transport system including ice cream cones inserted in the internal structure and the internal structure inserted in the external box. As it is possible to see, the ice cream is safely and stably inserted in the box.

[0021] Figure 13 presents the box of figure 12 in the closed position and ready to be opened for the extraction of the ice cream cones as shown in figure 14. Figure 15 shows in detail the preferred cone extraction method by extraction tab 112 removal.

[0022] Although the figures show external boxes suitable for the transport of two cones, the device according to the present invention can be made in such a way as to carry a greater number of cones, for example 4 or 6 cones, or even a number of cones equal to or greater than 8. In case the container is suitable for the transport of 4 cones, different solutions are possible. A first solution involves the use of an internal structure capable of housing 4 cones. The second solution is to insert in an external container two internal structures capable of containing two cones. Finally, it is possible to insert 4 structures from a cone. Similarly, it is possible to build structures suitable for the transport of 6 or 8 cones, both with a single internal structure, that with a number of internal structures that can vary from 2 to 8. A preferred way of realization of the invention involves the use of internal structures from two cones and external containers containing from one to 4 internal structures from two cones.

[0023] The device of this invention is suitable to contain refrigerating material, in order to lower the temperature inside the container and avoid the rapid melting of the ice cream.

[0024] Preferably, the external box of the present invention comprises a lid, comprising a handle.

[0025] According to a preferred embodiment, both the internal structure and the external box are obtained from a cutting die; this cutting die has several bending points, identifying different portions, and a plurality of elements that can be interlocked. The internal structure and the external box of the invention are preferably assembled by folding and interlocking of these portions and elements, so that these portions form the different elements of the container assembled.

[0026] According to another preferred embodiment, this container is obtained from several pieces, which pieces are assembled to form this container by folding and interlocking of these pieces and/or portions of pieces. Preferably, at least one of these pieces is a cutting die, as described above.

Claims

1. A device for transporting ice cream cones in vertical position, comprising:
 - i. an external container having dimensions such as to contain entirely and in vertical position one or more cones filled with ice cream;
 - ii. at least one internal structure that is extractable from the external container by using a handle, said internal structure comprising at least one horizontal partition (110), comprising at least one hole (111) for inserting an ice cream cone.
2. The device according to claim 1, wherein said internal structure comprises a second horizontal partition (120) comprising a number of holes (121) equal to the number of holes (111) of the first horizontal partition (110), and wherein the holes of the two partitions are aligned with respect to the vertical direction.
3. The device according to claim 2, wherein the diameter of hole (121) of the lower partition (120) is smaller than the diameter of hole (111) of the upper partition (110).
4. The device according to claims 2-3, wherein the internal structure comprises two lateral partitions and two horizontal partitions, wherein the two lateral partitions have a height equal to the height of the upper horizontal partition, such that the lateral partitions do not hinder the extraction of cones from the structure.
5. The device according to claims 1-4, wherein holes (111) of the upper partition (203) are delimited by foldable tabs (114) radially arranged all around the circumference of the hole.
6. The device according to claims 1-5, wherein the internal structure comprises an extraction tab (112) in correspondence with each hole (111).
7. The device according to claims 1-6, wherein the number of cones which can be transported varies from 2 to 8.
8. The device according to claim 7, wherein the external container comprises a number of internal structures comprised between 1 and 8.
9. A method for carrying cones filled with ice cream, which method comprises the following steps:
 - i. inserting at least one cone filled with ice cream in an internal structure (100; 300; 500);
 - ii. inserting at least one internal structure into an external container (760; 960).

10. The method of claim 9, wherein the number of cones that can be transported in each external container varies from 2 to 8, and the number of internal structures per each external container is from 1 to 8.

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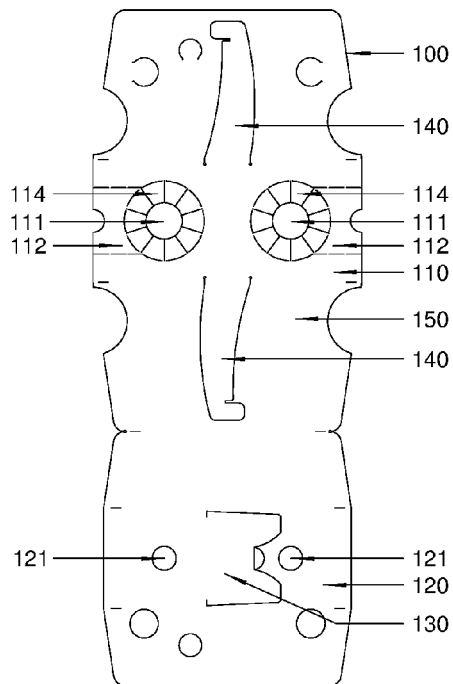


FIG. 1

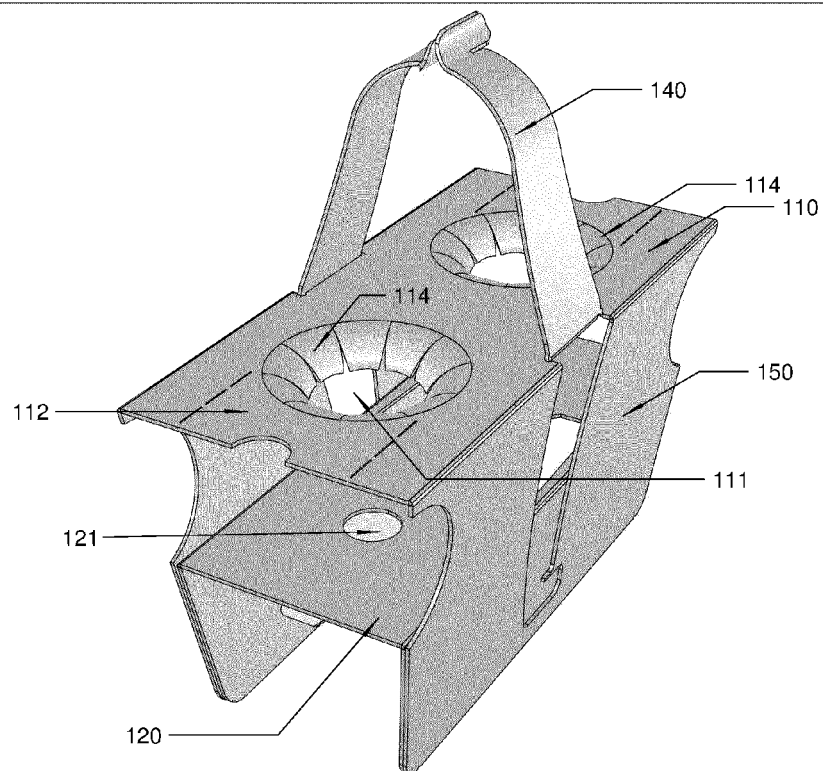


FIG. 2

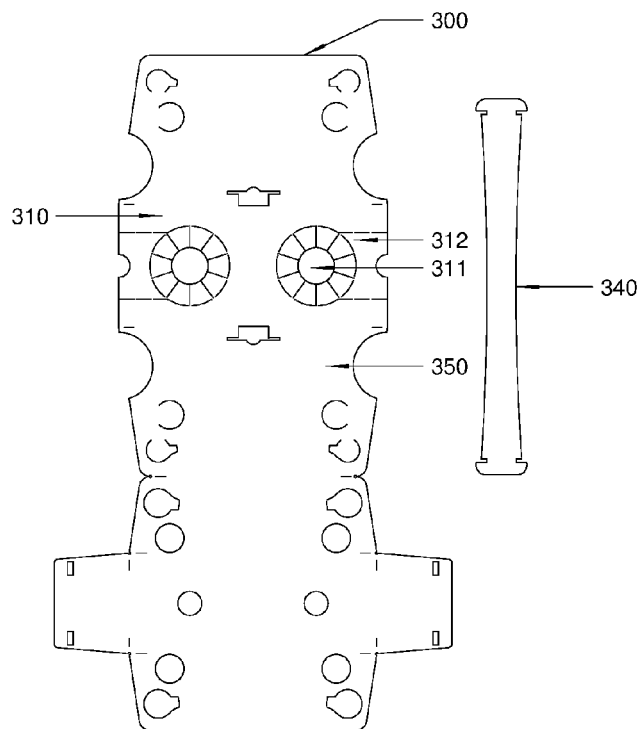


FIG. 3

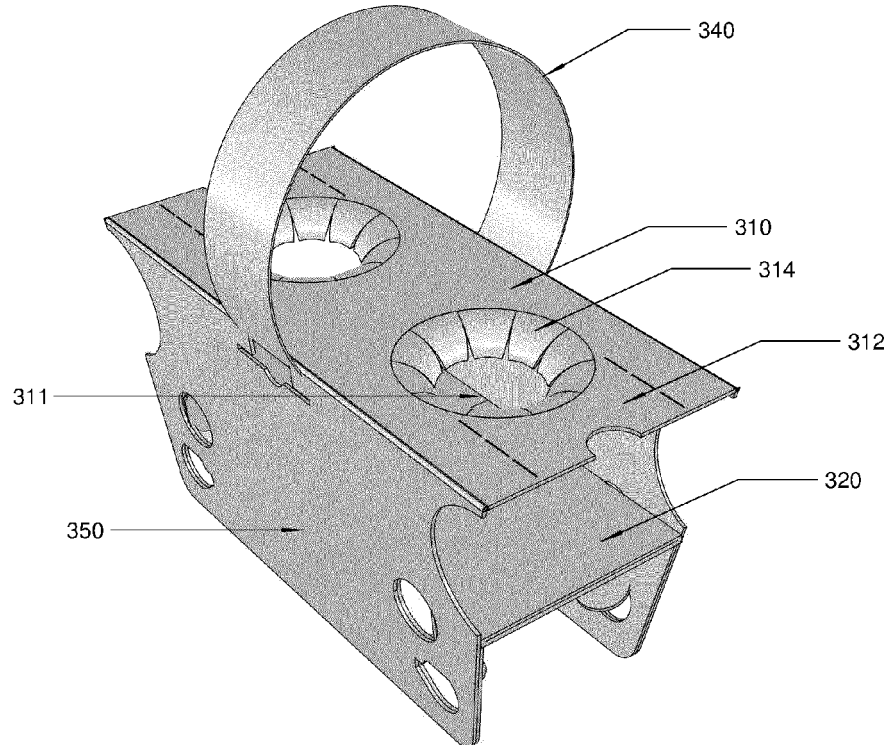
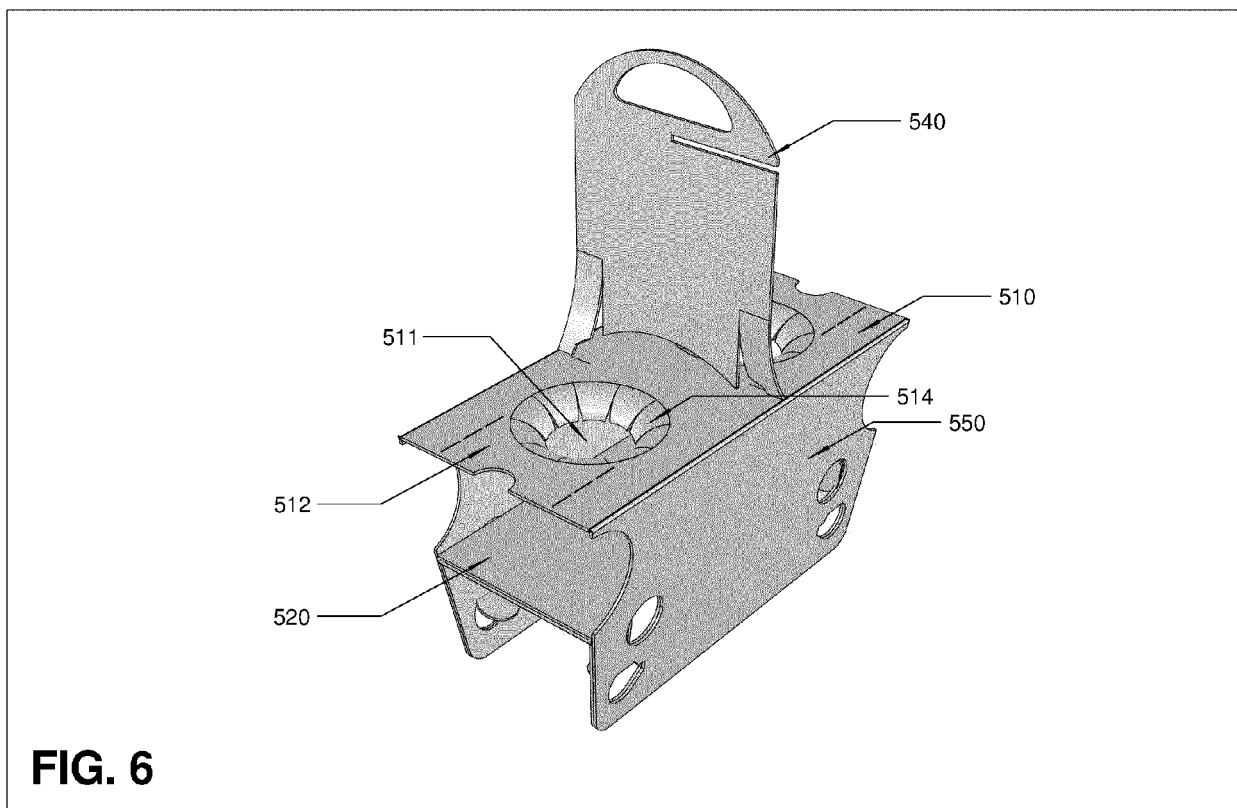
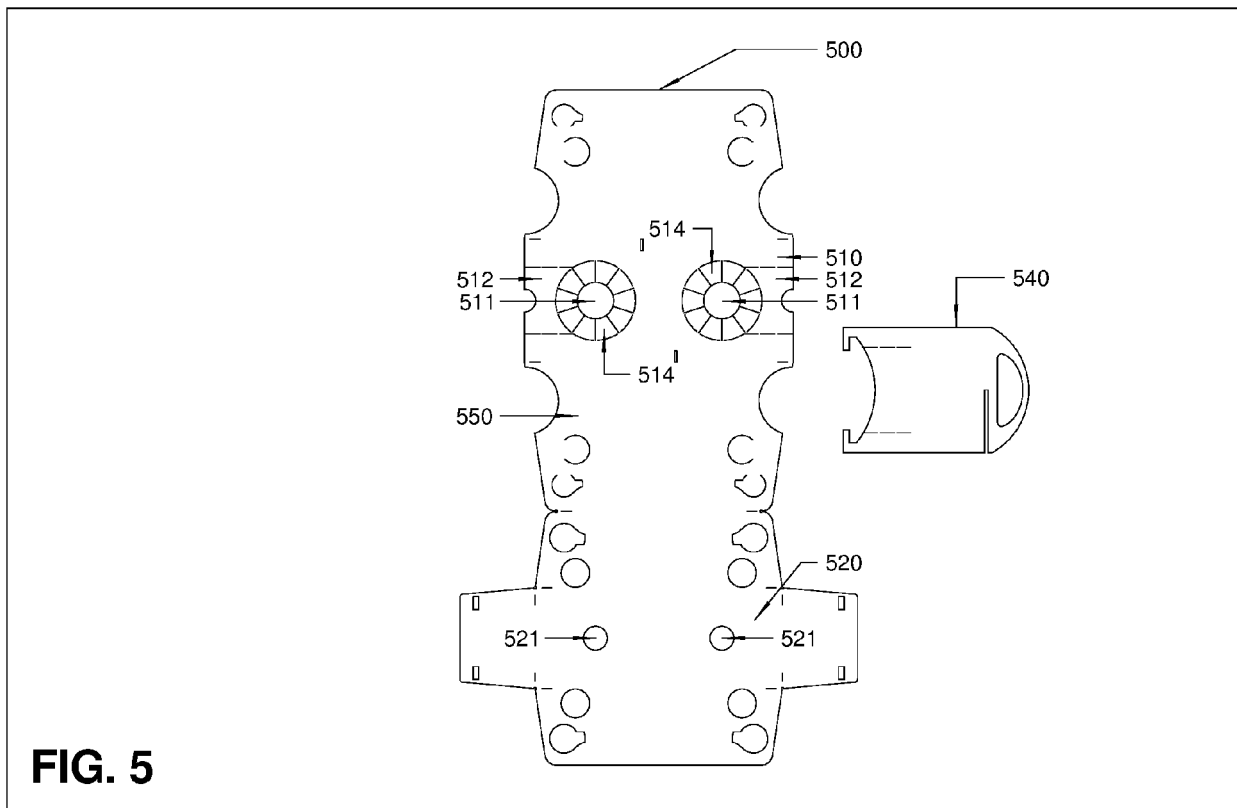
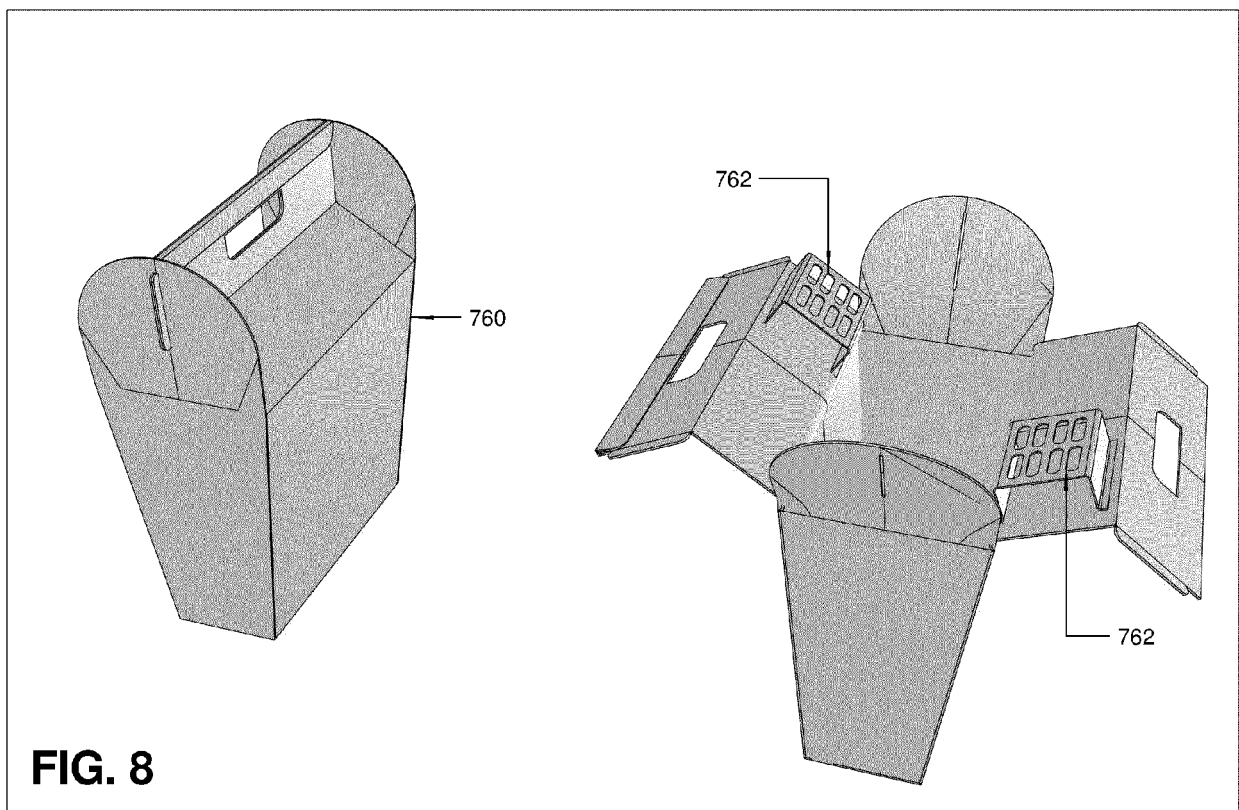
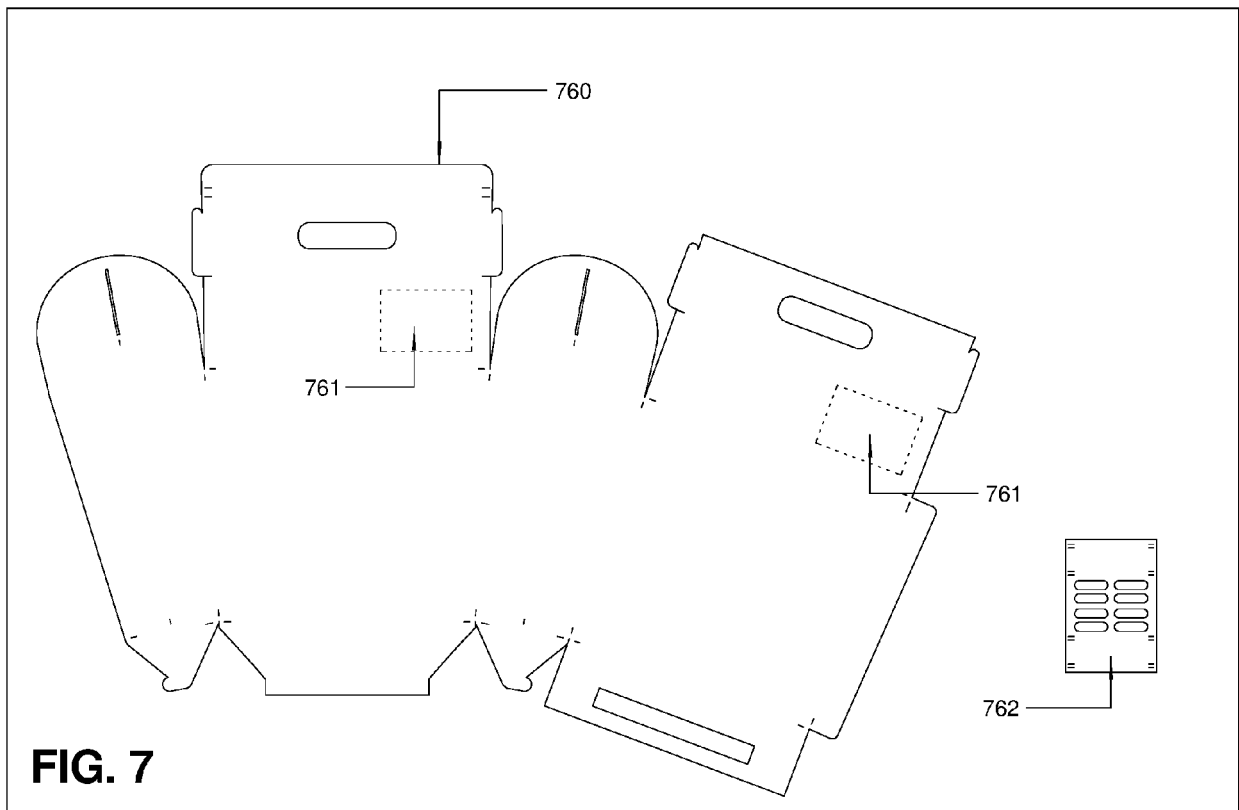
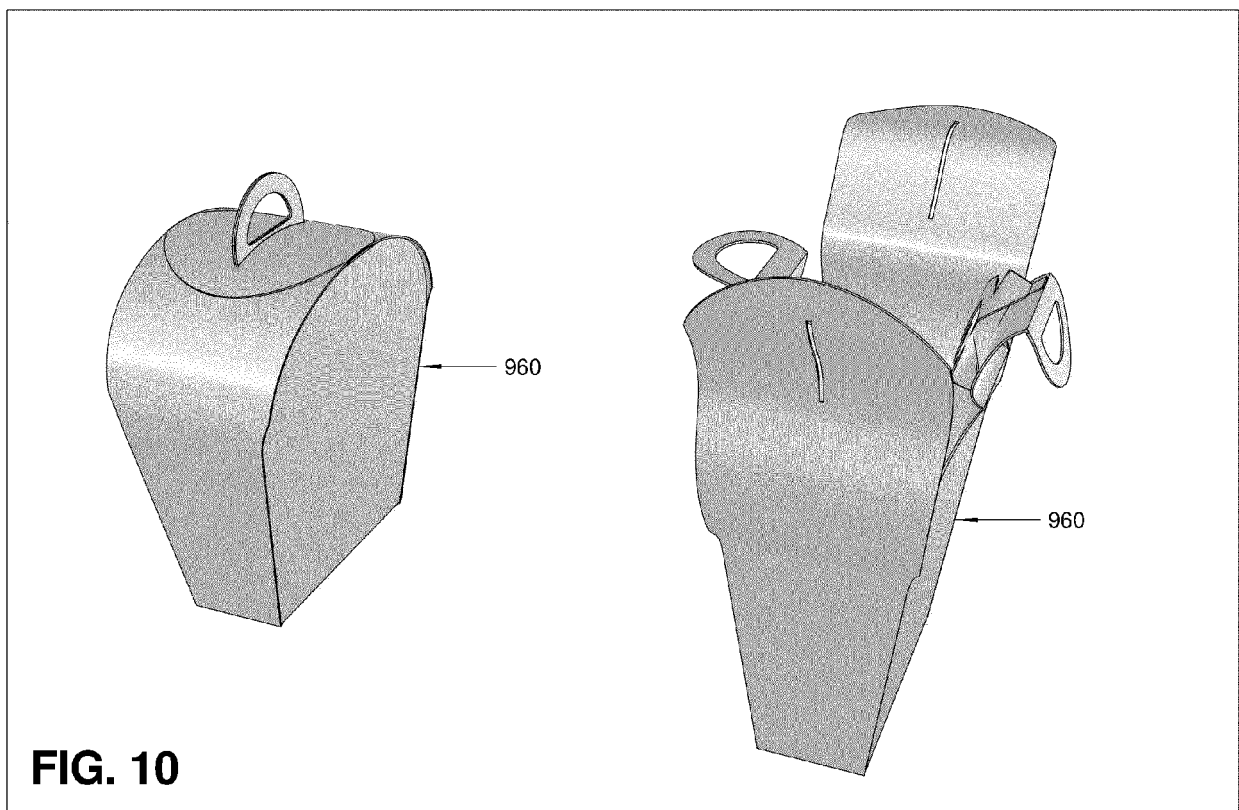
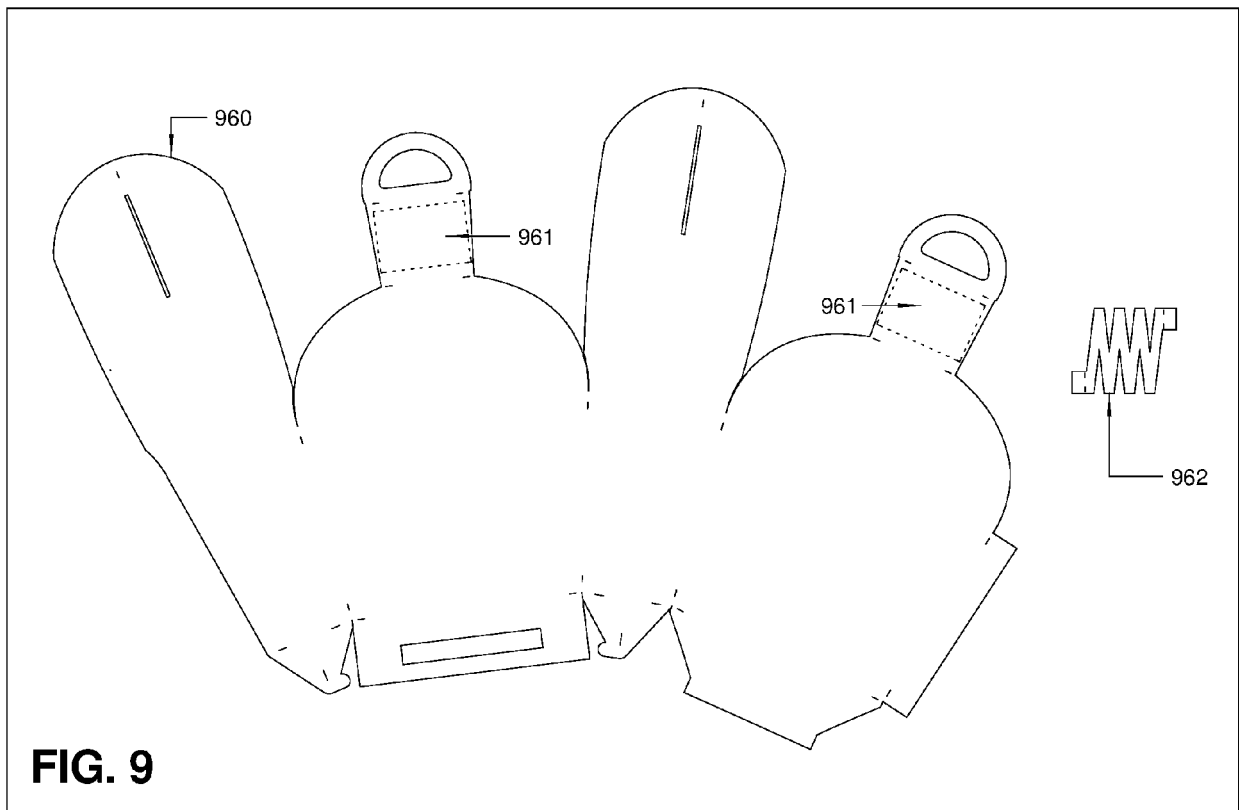
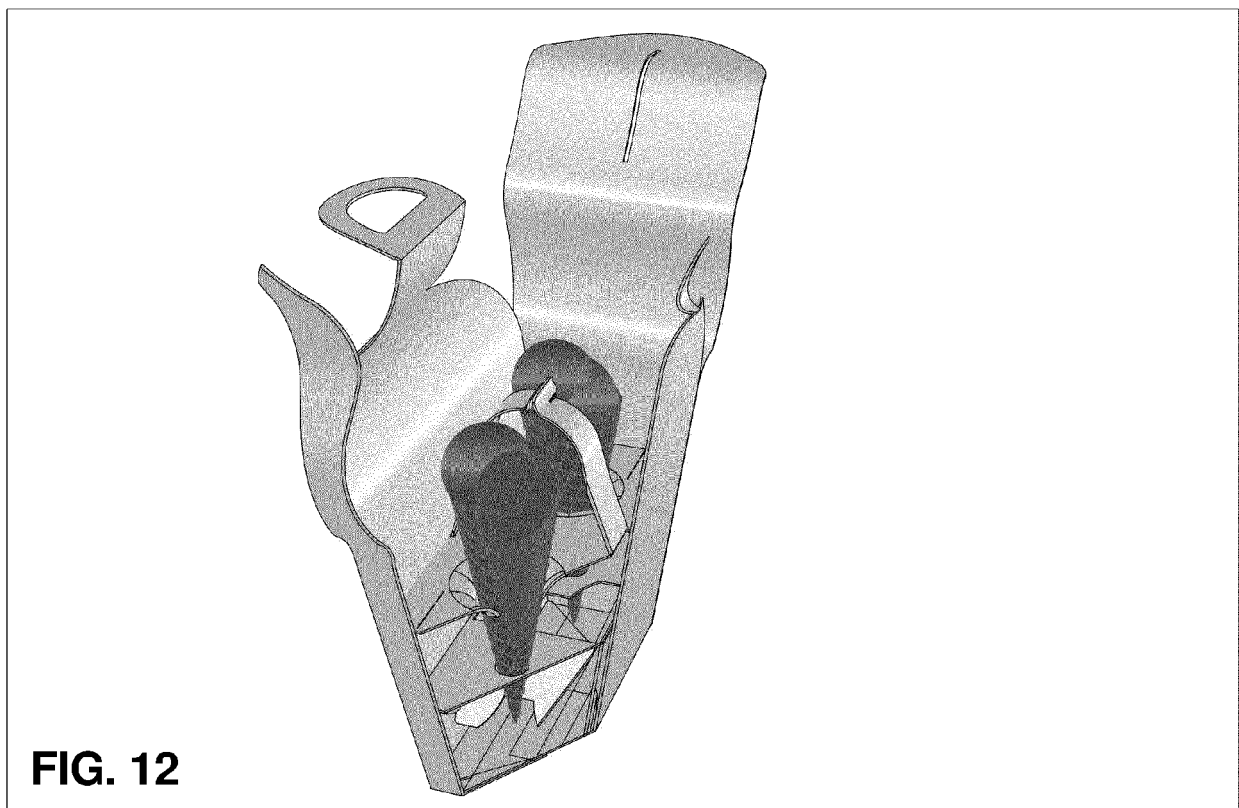
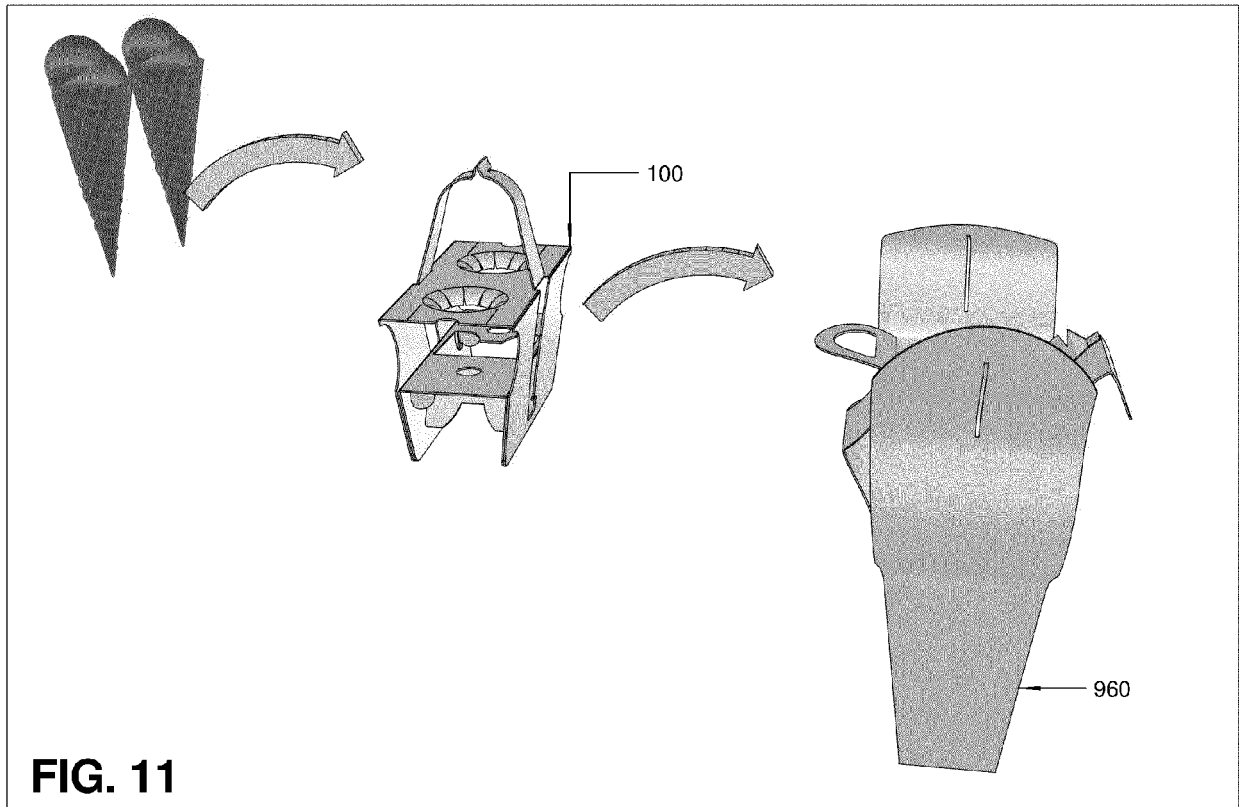


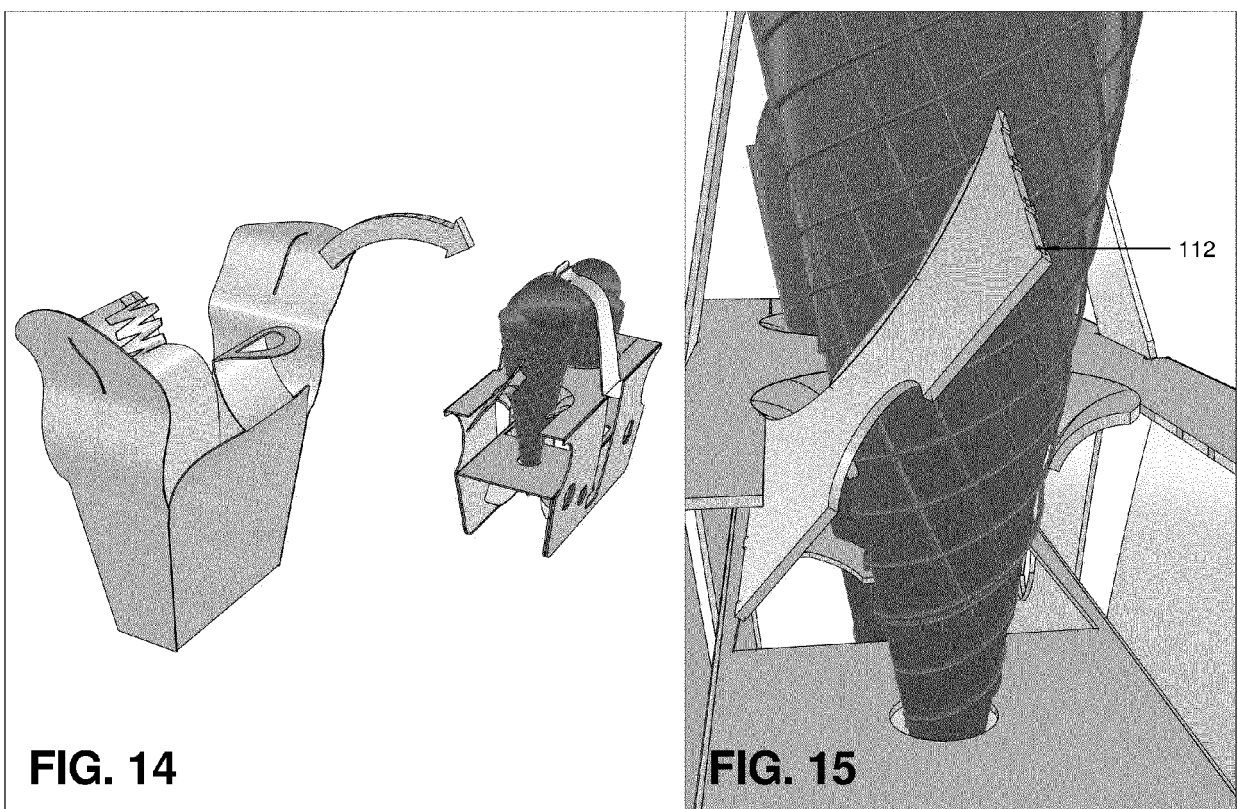
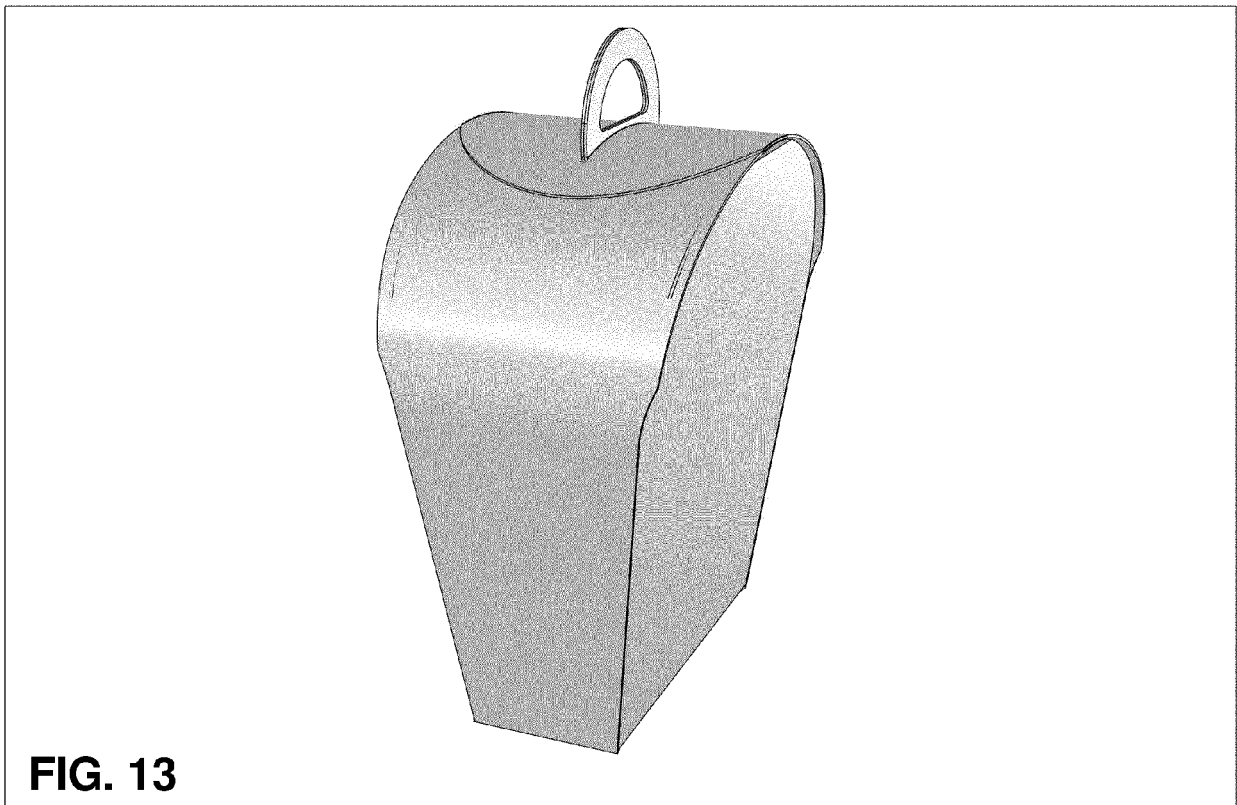
FIG. 4













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Application Number

EP 21 20 1869

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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 22 February 2022	Examiner Wimmer, Martin
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