

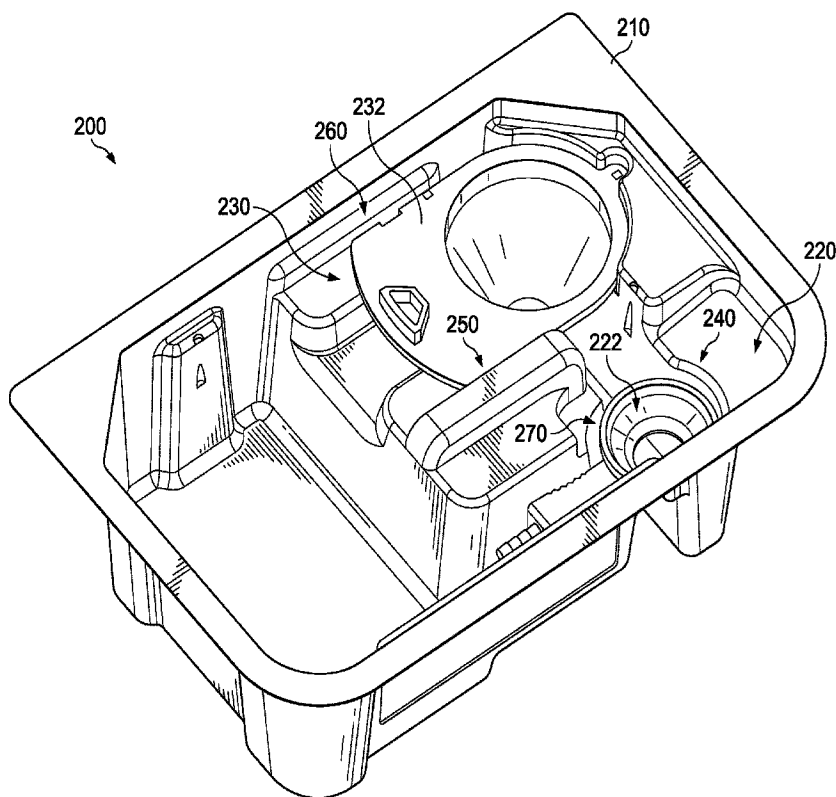


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(54) Titre : SITE D'EXTRACTION DEFINI SUR EMBALLAGE-COQUE STERILE

(54) Title: DEFINED REMOVAL SITE ON STERILE BLISTER PACK



(57) Abrégé/Abstract:

In certain embodiments, a blister pack includes a sterile holding area, a sterile eye surgery instrument, and at least one defined pressure point. The sterile eye surgery instrument may be an applanation cone or a lens. A defined pressure point is a movable lug located on the back of the blister pack that can be actuated for controlled removal of the sterile eye surgery instrument. The defined pressure point is marked with an arrow indicating the direction of actuation.

## **ABSTRACT**

In certain embodiments, a blister pack includes a sterile holding area, a sterile eye surgery instrument, and at least one defined pressure point. The sterile eye surgery instrument may be an applanation cone or a lens. A defined pressure point is a movable lug located on the back of the blister pack that can be actuated for controlled removal of the sterile eye surgery instrument. The defined pressure point is marked with an arrow indicating the direction of actuation.

## **DEFINED REMOVAL SITE ON STERILE BLISTER PACK**

### **TECHNICAL FIELD**

The present disclosure relates to systems and methods for systematic, controlled removal of sterile products from blister packs for use during eye surgery.

### **BACKGROUND**

During eye surgery, such as refractive surgery, sterile products are often provided in blister packs. These products of have sensitive surfaces, such as a lens.

Currently, a non-sterile user, such as the operating room nurse, opens the blister pack. The outside of the blister pack is not sterile and must be touched to open the closed blister pack. Then, non-sterile user must perform hand disinfection before removing items from the opened blister pack. This complicates and lengthens the surgical procedure and makes accidental contamination and loss of sterility more likely.

### **SUMMARY**

This disclosure provides a way to allow removal of the sterile items with sensitive surfaces from the blister pack without requiring the non-sterile user to perform hand disinfection.

In one embodiment, the disclosure relates to a method of using a blister pack with sterile products inside, removing the protective layer from the blister pack, inverting the blister pack, placing the blister pack on a sterile surface, pressing on at least one defined pressure point on the back of the blister pack, and removing the blister pack.

In another embodiment, the disclosure relates to a method of using a blister pack with sterile products inside, removing the protective layer from the blister pack, inverting the blister pack, placing the blister pack on a sterile surface, removing a removable lug from at least one defined point on the back of the blister pack, and removing the blister pack.

In another embodiment, the disclosure relates to a blister back with a sterile holding area, a sterile eye surgery instrument, and at least one point marked on the back of the back of the blister pack for controlled removal of the sterile eye surgery instrument.

Other technical advantages will be apparent to those of ordinary skill in the art in view of the following specification, claims, and drawings.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

For a more complete understanding of the present invention and its features and advantages, reference is now made to the following description, taken in conjunction with the accompanying drawings, and in which:

FIG. 1 is a not-to-scale schematic view of the front of a blister pack with two sterile eye surgery instruments and defined pressure points;

FIG. 2 is a not-to-scale schematic view of the back of the blister pack of FIG. 1;

FIG. 3 is an elevation view of the front of a blister pack with defined pressure points;

FIG. 4 is an elevation view of the back of the blister pack of FIG. 3;

FIG. 5 is flow chart of a method for using a blister pack with defined pressure points.

### **DETAILED DESCRIPTION**

This disclosure provides a way to allow removal of the sterile items with sensitive surfaces from the blister pack without requiring the non-sterile user to perform hand disinfection. This disclosure provides a blister pack with defined pressure points and methods of its use.

In the following description, details are set forth by way of example to facilitate discussion of the disclosed subject matter. It should be apparent to a person of ordinary skill in the field, however, that the disclosed embodiments are exemplary and not exhaustive of all possible embodiments.

Referring now to the drawings, FIG. 1 and FIG. 2 are blister pack 100. In the embodiment shown in FIG. 1, the front 110 of a blister pack 100 includes two sterile holding areas 120, 130. Each sterile holding area is shown with a single sterile eye surgery instrument (e.g. sterile eye surgery instrument 122, sterile eye surgery instrument 132). Blister packs with a single sterile holding area are also possible. More than the one sterile eye surgery instrument may be placed in a single sterile holding area. In the embodiment shown in FIG. 2, the back 190 of blister pack 100 is shown. The location of sterile holding areas 120 and 130 and pressure points 140, 150, 160, and

170 are shown. Pressure points 140, 150, 160, and 170 are located within the sterile holding areas 120 and 130.

Non-limiting examples of sterile eye surgery instruments that could be used during eye surgery, such as refractive surgery, is an applanation cone or a lens.

FIG. 1 and FIG. 2, as shown, are actually marked with a circled “X” at pressure points 140, 150, 160, and 170. Such markings are optional for any or all pressure points 140, 150, 160, and 170, and if marked, other indicators may be used such as an “X” mark or an embossed word, *e.g.* “push.” Optionally, pressure points 140, 150, 160, and 170 are marked on the rear surface 190 of blister pack 100 and not on the front surface 110. If the blister pack requires that the pressure points be pressed in a particular order or in particular combinations, then the blister pack will be so marked.

The invention does not require the rear surface 190 of blister pack 100 to be sterile.

Pressure points are placed to avoid sensitive spots or brittle spots on the sterile eye surgery instruments. In the case of a package design with simple sterile barriers, the absence of such defined pressure points means an increased risk of damage, especially to sensitive surfaces during removal of the sterile eye surgery instrument. By allowing controlled removal of the sterile eye surgery instrument using the pressure points, the sterile eye surgery instrument should drop out at a controlled time and in a controlled manner.

In another embodiment, not shown, blister pack 100 may include movable lugs instead of any one or more of the pressure points. The movable lugs are designed to keep the inside of blister pack 100 sterile when they are moved, *e.g.* actuated, removed, moved, or unscrewed.

FIG. 3 is an elevation view of the front of a blister pack 200 with defined pressure points. In the embodiment shown in FIG. 3, the front 210 of a blister pack 200 includes two sterile holding areas 220, 230. Each sterile holding area is shown with a single sterile eye surgery instrument (*e.g.* sterile eye surgery instrument 222, sterile eye surgery instrument 232). Blister packs with a single sterile holding area are also possible. More than one sterile eye surgery instruments may be placed in a single sterile holding area. The location of sterile holding areas 220 and 230 and pressure points 240, 250, and 260 are shown.

FIG. 4 is an elevation view of the back of the blister pack 200 with defined pressure points. In the embodiment show in FIG. 4, the back 290 of blister pack 200 is shown. The location of sterile holding areas 220 and 230 and pressure points 240, 250, and 260, are shown. Pressure points 240, 250, and 260, are located near the sterile holding areas 220 and 230.

FIG. 5 is flow chart of a method of using a blister pack with defined removal sites, such as blister pack 100.

In this embodiment, operating room (OR) preparation or an eye surgery procedure is begun, 502.

A protective cover is removed from the blister pack, 504.

Then the blister pack is inverted onto a sterile surface, 506. It is important to maintain the surface and the inside of the blister pack as both sterile.

Next, at least one and likely all pressure points are pressed, 508. If the blister pack requires that the pressure points be pressed in a particular order or in particular combinations, then the blister pack will be so marked. In another embodiment, the pressure points are removable lugs that are removed at this step.

Finally, the blister pack is removed from the sterile surface, 510. The method ends, 520.

## **CLAIMS:**

1. A blister pack comprising:
  - a sterile holding area;
  - a sterile eye surgery instrument, the sterile eye surgery instrument comprising an applanation cone or a lens; and
  - at least one defined pressure point on a back of the blister pack for controlled removal of the sterile eye surgery instrument, the defined pressure point being a movable lug that can be actuated, the defined pressure point marked with an arrow indicating a direction of actuation.
2. The blister pack of Claim 1, wherein the movable lug is removable.
3. The blister pack of Claim 1, wherein the movable lug is unscrewable.
4. The blister pack of Claim 2 or 3, further comprising:
  - a first pressure point marked to indicate it should be used first;
  - a second pressure point marked to indicate it should be used second.
5. A method for removing a sterile eye surgery instrument, the sterile eye surgery instrument comprising an applanation cone or a lens, from a blister pack comprising:
  - removing a protective layer from the blister pack;
  - inverting the blister pack;
  - placing the blister pack on a sterile surface;
  - applying pressure to at least one defined pressure point on a back of the blister pack, the defined pressure point being a movable lug that can be actuated, the defined pressure point marked with an arrow indicating a direction of actuation;
  - and
  - removing the blister pack.

6. The method of claim 5, wherein the step of applying pressure to at least one defined pressure point on the back of the blister pack comprises:
- pressing a first defined pressure point marked to indicate it should be used first;
  - and
  - pressing a second defined pressure point marked to indicate it should be used second.
7. The method of claim 6, wherein applying pressure to at least one defined pressure point on the back of the blister pack comprises pulling on the lug.
8. The method of claim 6, wherein applying pressure to at least one defined pressure point on the back of the blister pack comprises unscrewing the lug.
9. The method of claim 6, wherein the step of applying pressure to at least one defined pressure point on the back of the blister pack comprises:
- moving a first lug marked to indicate it should be used first;
  - moving a second lug marked to indicate it should be used second.



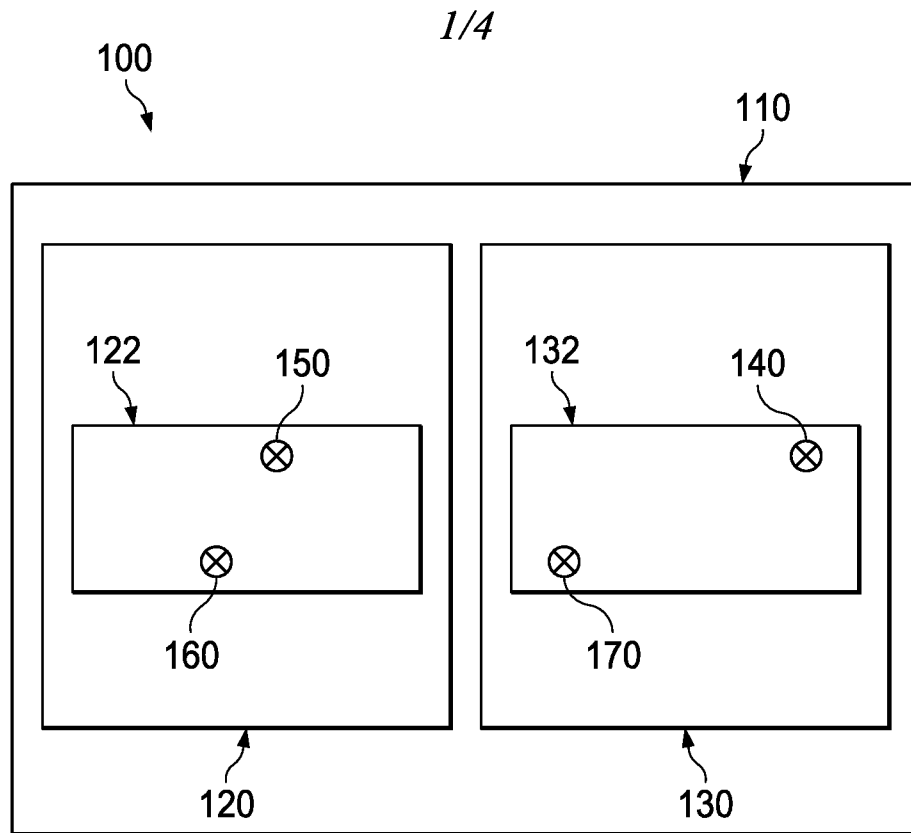


FIG. 1

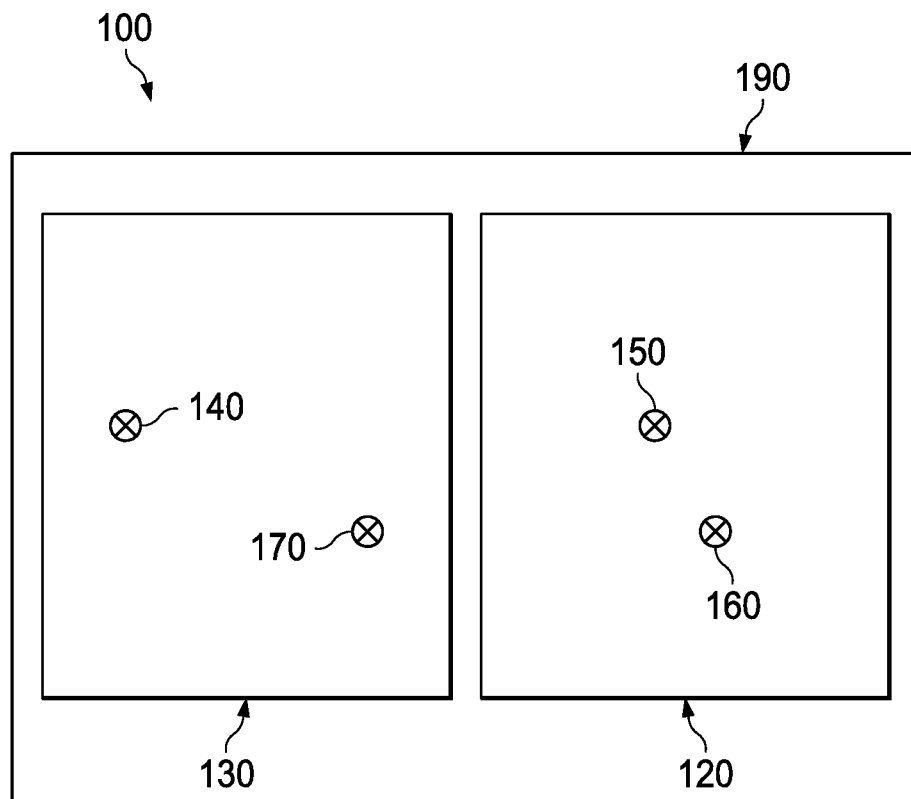


FIG. 2

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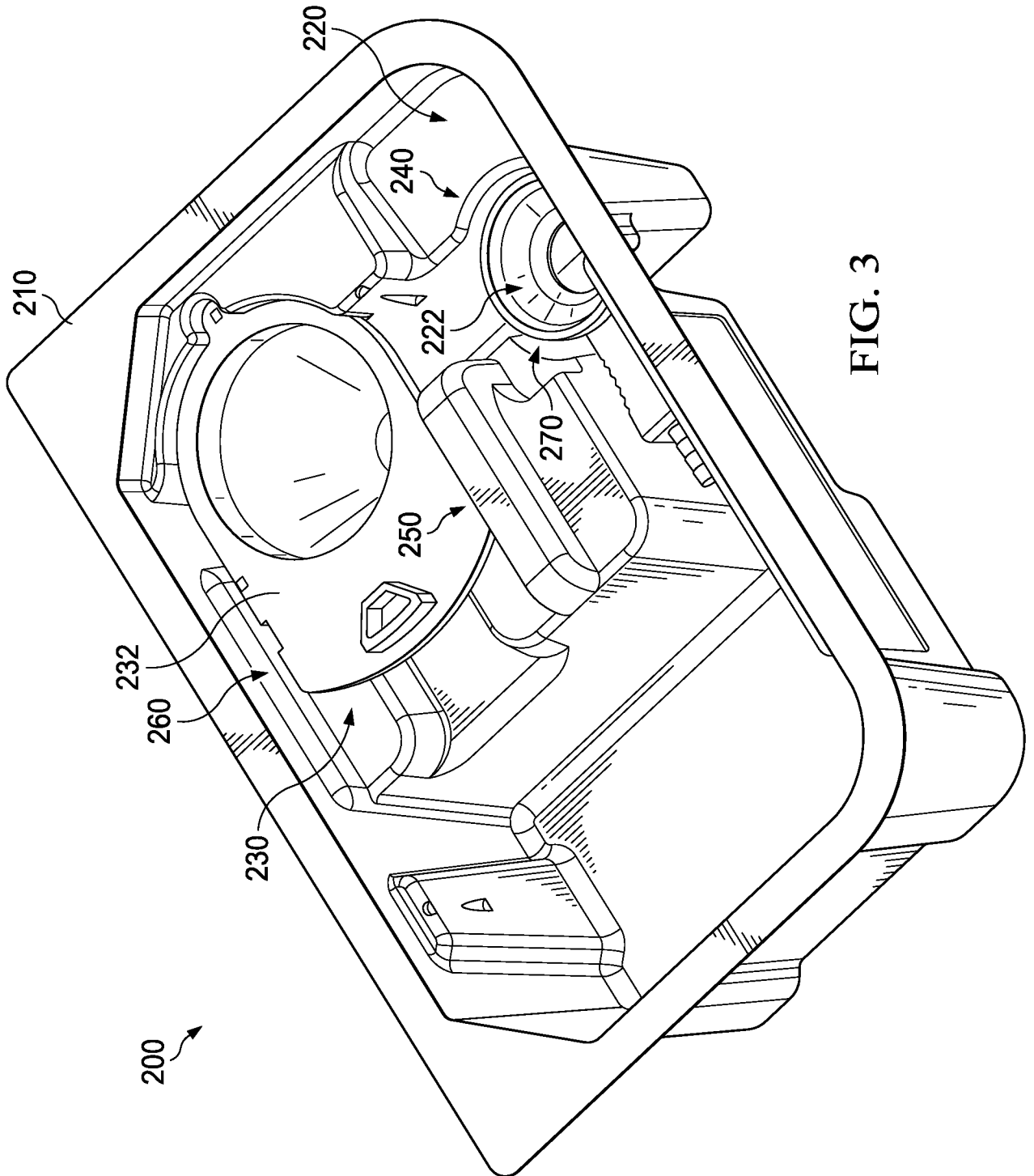


FIG. 3

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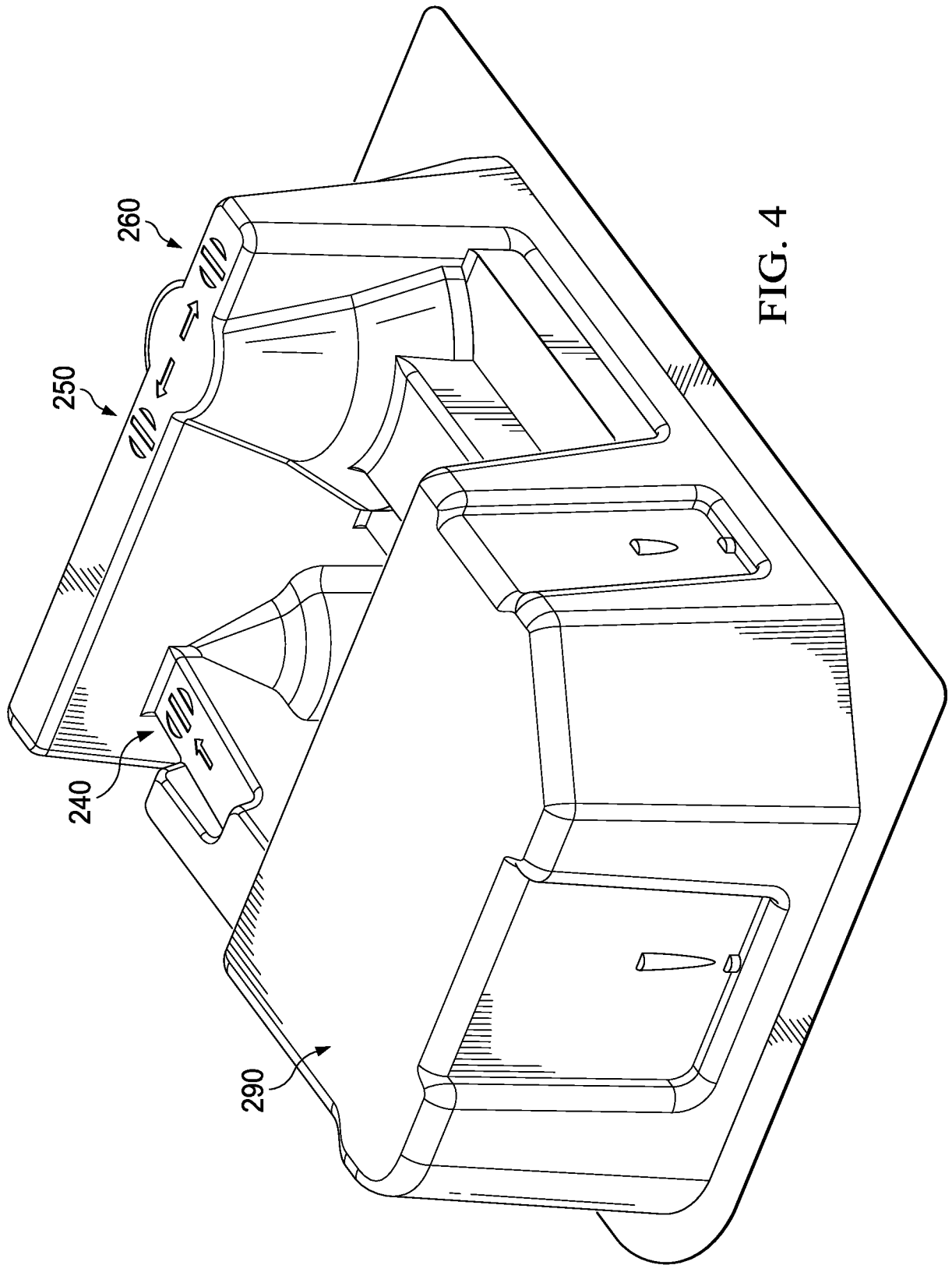


FIG. 4

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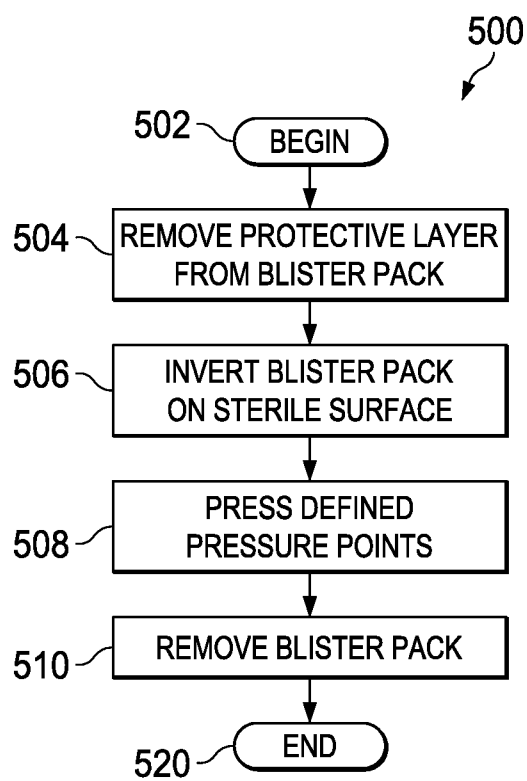


FIG. 5

