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(54) **BANDAGE DISPENSER**

(57) **ABSTRACT**

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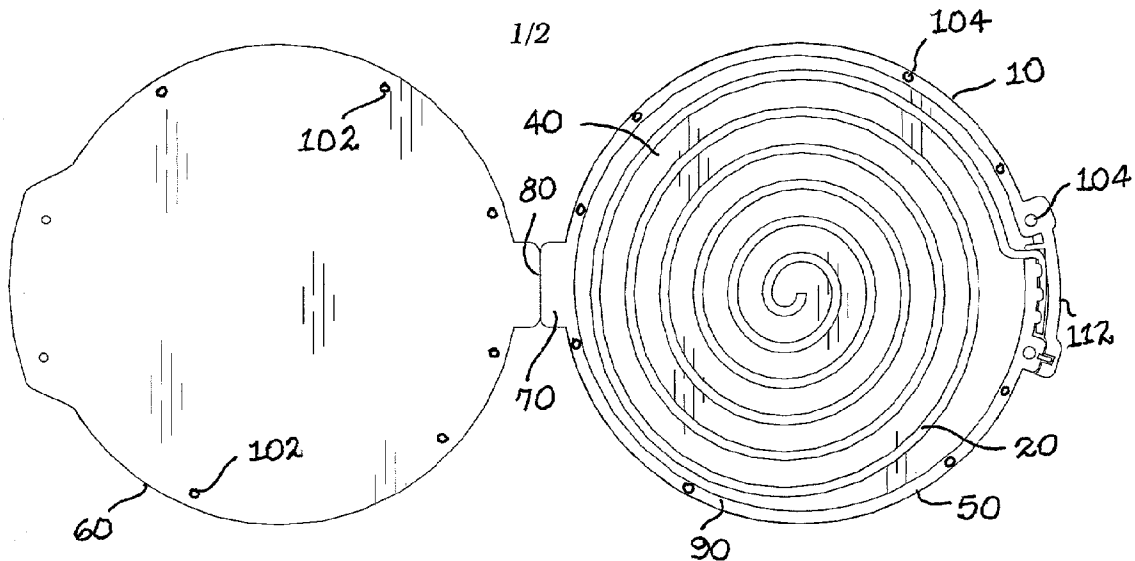
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A dispensing apparatus comprises the combination of a bandage case and a roll of bandages, the bandage case including a bottom panel and a side wall peripherally mounted integrally to the bottom panel, and a top panel extending from a tab mounted on the peripheral side wall at a living hinge adapted for folding the top panel into surface contact with a top edge of the peripheral side wall. This structure is a single molded part. The top panel is in airtight contact with the sidewall and is secured by a pin-in-hole engagement. The side wall provides a tape exit comprising a pair of side wall portions in side-by-side positions with a tape exit aperture and a tape dispensing cutoff element. The exit aperture provides flexible closure lips enabled for tape sliding contact to exclude dust from the interior of the case. The roll of bandages comprises a coiled tape carrier mounted between the top and bottom panels, one end of the tape carrier extending through the tape exit aperture in a position for being manually grasped for pulling the tape carrier from the bandage case for receiving each of a sequentially positioned series of bandages mounted on the coil.



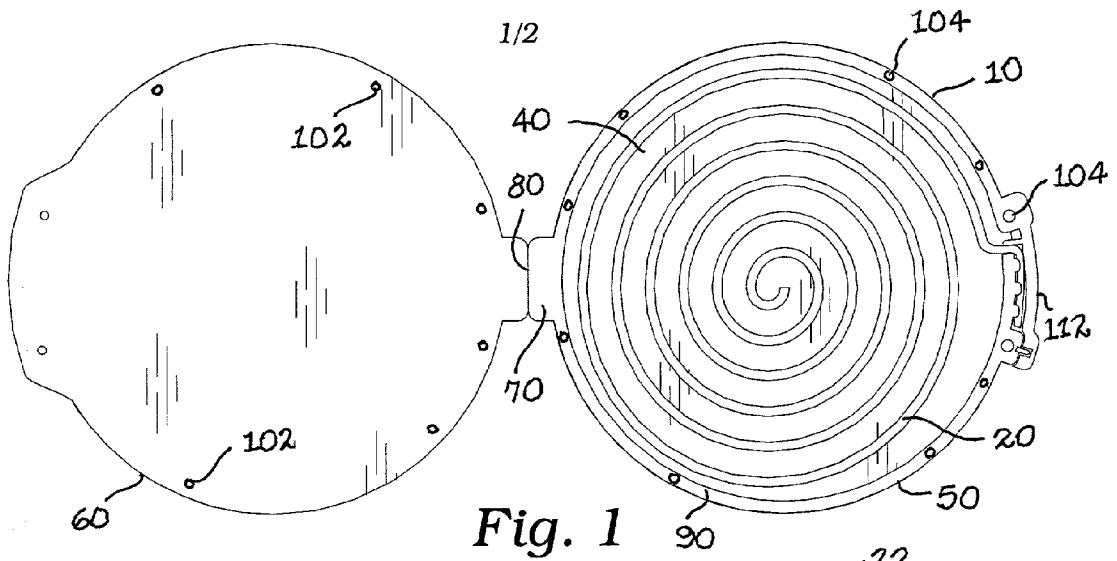


Fig. 1

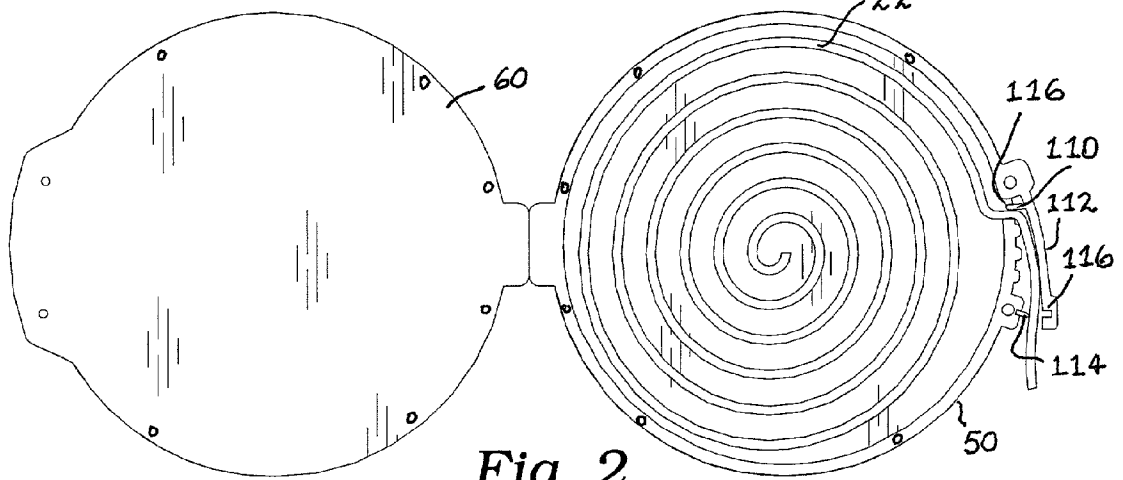


Fig. 2

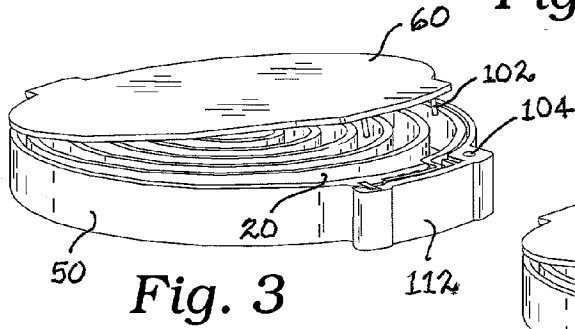


Fig. 3

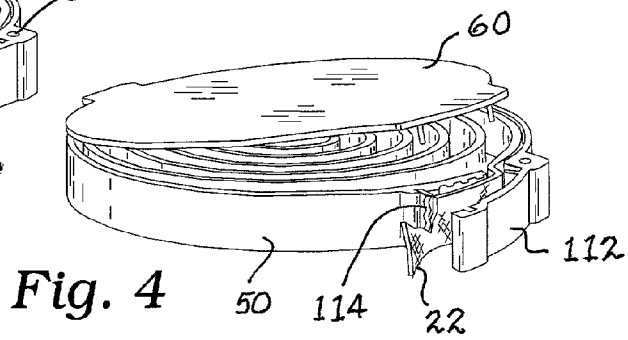


Fig. 4

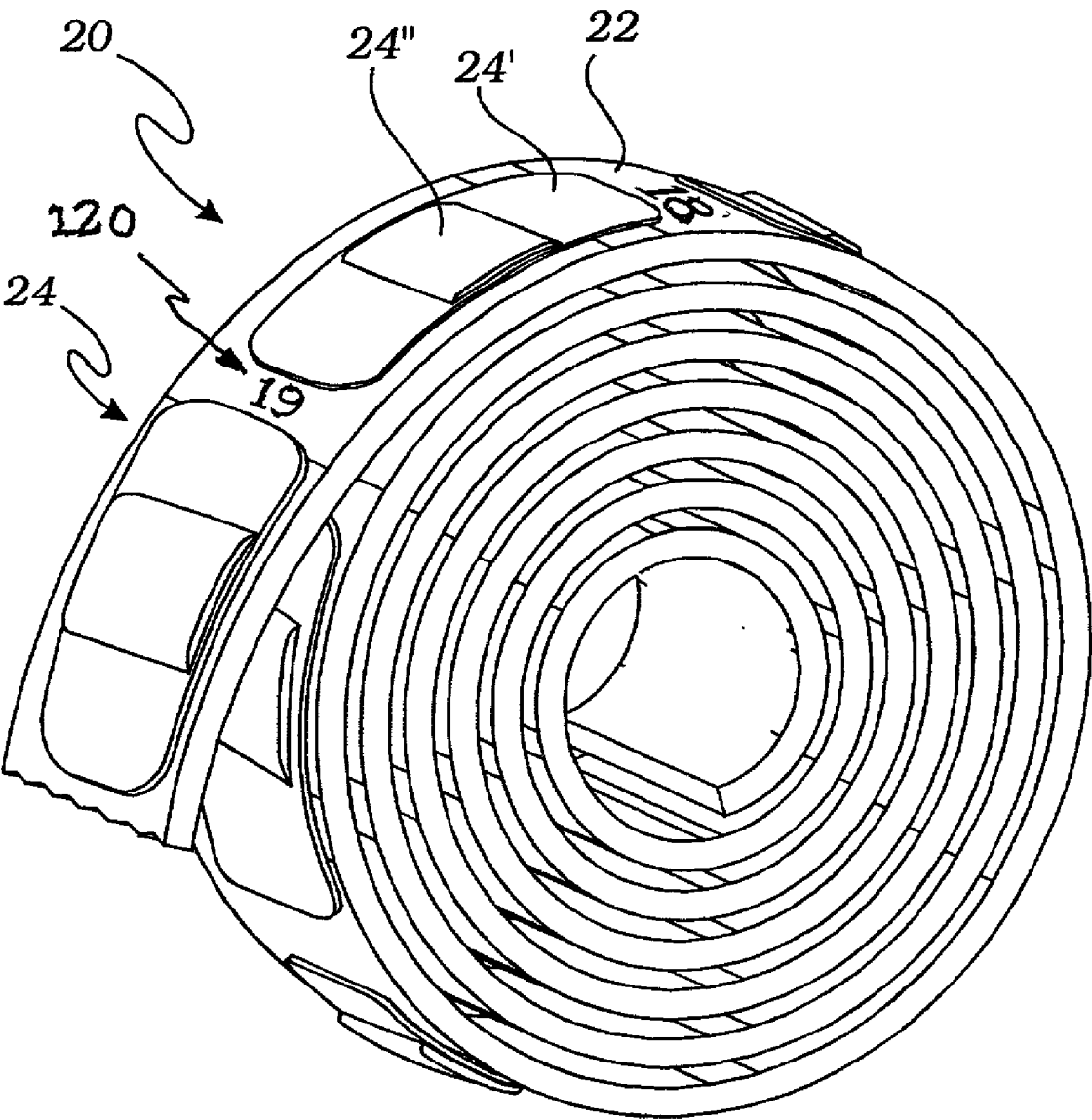


Fig. 5

BANDAGE DISPENSER

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] This invention relates generally to medical product dispensing and more particularly to a dispenser and coil of bandages contained within with particular emphasis on construction of the dispenser and the means for maintaining sterile conditions for the coil of bandages.

[0003] 2. Description of Related Art

[0004] The following art defines the present state of this field:

[0005] Wilcox, U.S. Des. Pat. No. 376,718 describes a bandage dispenser design.

[0006] Baratta, U.S. Pat. No. 3,530,494 describes a ribbon of adhesive bandages comprising a carrier ribbon and a plurality of adhesive bandage strips, said bandage strips comprising an adhesive coating on one surface thereof with a wound cover, in which the carrier ribbon comprises a top surface and bottom surface and is substantially coiled about itself spirally, and in which the said bandage strips are in end spaced relationship from each other with each bandage strip being positioned between portions of said carrier ribbon comprising a bottom surface of a portion of a coil of said ribbon and a top surface of a portion of a coil of said carrier ribbon, with said bottom and top surface portions of said coiled carrier ribbon being secured together by securing means capable of being separated by hand pulling, said securing means providing a seal around the perimeter of each bandage strip.

[0007] Adams, IV, U.S. Pat. No. 3,835,992 describes an elongated strip carrier for a plurality of bandages serves as a clean storage package for the bandages and also aids greatly in the dispensing of individual bandages as they are needed. Bandages may be mounted on one or two sides of the carrier strip and the strip may be coiled or otherwise formed into a compact storage body. The awkward handling of individually wrapped small bandages is avoided.

[0008] Goldstein, U.S. Pat. No. 4,735,342 describes a dispenser containing a plurality of packaged rolls of bandage strips including a case having upper section and a lower section, which accommodates packaged rolls of bandage strips. The case has at least one slot for dispensing bandage strips and the bottom side of the case has a flat area, which can be adhered to a flat support. Each packaged roll of bandage strips includes a series of bandage strips disposed in end-to-end relation with packaging material surrounding the bandage strips, transverse seals for maintaining strips sterilely separate from each other, lines of weakness in the packaging material, each located forward of a respective seal for aiding the separation of the packaging material and a corresponding bandage strip from the remainder of the roll while maintaining the bandage strips in the remainder of the roll in a sealed sterile condition.

[0009] Goldstein, U.S. Pat. No. 4,807,753 describes a dispenser containing a plurality of packaged rolls of bandage strips including a case having upper section and a lower section which accommodates packaged rolls of bandage strips. The case has at least one slot for dispensing bandage strips and the bottom side of the case has a flat area which

can be adhered to a flat support. Each packaged roll of bandage strips includes a series of bandage strips disposed in end-to-end relation with packaging material surrounding the bandage strips, transverse seals for maintaining strips sterilely separate from each other, lines of weakness in the packaging material, each located forward of a respective seal for aiding the separation of the packaging material and a corresponding bandage strip from the remainder of the roll while maintaining the bandage strips in the remainder of the roll in a sealed sterile condition.

[0010] Taulbee, deceased et al., U.S. Pat. No. 4,993,586 describes an adhesive bandage-dispensing device, which facilitates efficient and quick access to an adhesive bandage. The device has a base, a spool holder, a removal platform having a slicer and cutter and an adhesive bandage carrier spool mounted to the device by the spool holder. A continuous strip of adhesive bandages is mounted on the spool. The strip consists of separate adhesive bandages wrapped in a protective coating. The action of pulling the strip away from the spool over the platform causes a portion of the protective covering of strip to be sliced by the slicer. This will expose a bandage, which then can be lifted off the remaining portion of the protective coating for use. After this, the cutter is used to separate the bandageless strip from the device for subsequent disposal.

[0011] Tomaiuolo, U.S. Pat. No. 5,782,786 describes an adhesive bandage dispensing system comprising a bandage retaining and dispensing spool and a continuous elongated bandage strip wound around the spool. The bandage strip comprises a plurality of individual adhesive bandages serially connected to one another at perforated edges. The perforations are oriented transverse to the elongated direction of the bandage strip and structurally weaken the bandage strip so that individual bandages may be separated from the bandage strip at the perforation lines by application of removal force thereto. The bandage strip is sized and shaped to ensure that absorbent pads of the bandage strip are sealingly enclosed by the bandages strip itself. The invention, thus, provides a bandage dispensing system which prevents contamination of the individual bandages without the need for additional packaging materials. Numerous advantageously shaped spools for use in the bandage dispensing system are disclosed.

[0012] The prior art teaches bandage dispensers and coiled bandage dispensing but does not teach the present invention dispensing apparatus and method including a one-piece molded dispenser with folded-over cover and lip seal for exclusion of dust from the interior of the dispenser. The present invention fulfills these needs and provides further related advantages as described in the following summary.

SUMMARY OF THE INVENTION

[0013] The present invention teaches certain benefits in construction and use which give rise to the objectives described below.

[0014] A bandage dispensing apparatus comprises the combination of a bandage case and a roll of bandages, the bandage case including a bottom panel and a side wall peripherally mounted integrally to the bottom panel, and a top panel extending from a tab mounted on the peripheral side wall at a living hinge adapted for folding the top panel into surface contact with a top edge of the peripheral side

wall. This structure is a single molded part. The top panel is in airtight contact with the sidewall and is secured by a pin-in-hole engagement. The side wall provides a tape exit comprising a pair of side wall portions in side-by-side positions with a tape exit aperture and a tape dispensing cutoff element. The exit aperture provides flexible closure lips enabled for tape sliding contact to exclude dust from the interior of the case. The roll of bandages comprises a coiled tape carrier mounted between the top and bottom panels, one end of the tape carrier extending through the tape exit aperture in a position for being manually grasped for pulling the tape carrier from the bandage case for receiving each of a sequentially positioned series of bandages mounted on the coil. The invention is compact, light weight, and designed for use as a highly portable hand-held dispenser.

[0015] A primary objective of the present invention is to provide an apparatus and method of use of such apparatus that provides advantages not taught by the prior art.

[0016] Another objective is to provide such an invention capable of low cost manufacture through molding in a single injection with a living hinge.

[0017] A further objective is to provide such an invention capable of maintaining a coil of bandages in a sterile condition until each bandage is used.

[0018] A still further objective is to provide such an invention capable of numerical accounting for each of the bandages so that it is possible to know how many units are enclosed within the case.

[0019] Other features and advantages of the present invention will become apparent from the following more detailed description, taken in conjunction with the accompanying drawings, which illustrate, by way of example, the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] The accompanying drawings illustrate the present invention. In such drawings:

[0021] FIG. 1 is a plan view of the preferred embodiment of the invention with exit door closed;

[0022] FIG. 2 is a plan view thereof with exit door open and tape ready for cutting; and

[0023] FIG. 3 is a perspective view thereof with cover panel raised and exit door closed;

[0024] FIG. 4 is a perspective view thereof with cover panel raised and exit door open demonstrating severing of tape; and

[0025] FIG. 5 is a perspective view of a coil of bandages of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0026] The above described drawing figures illustrate the invention in at least one of its preferred embodiments, which is further defined in detail in the following description.

[0027] The present invention is a dispensing apparatus comprising in combination, a bandage case 10 made of a plastic material such as polypropylene by injection molding in a manner well known in the art; and a tape or roll of

bandages 20 preferably coiled and mounted within the bandage case 10 for dispensing. The bandage case 10 includes a case bottom panel 40 with an integrally molded side wall 50 which is peripherally mounted on the bottom panel 40. A top panel 60 extends from a tab 70 on the peripheral side wall 50 and includes a living hinge 80 (a thinner section of the plastic material which is highly flexible) which is adapted by its structure for enabling the folding of the top panel 60 into surface contact with a top edge 90 of the peripheral side wall 50. The as-molded position of the top panel 60 is illustrated in FIGS. 1 and 2, while the folded-over position of the top panel 60 is shown in FIGS. 3 and 4. When folded over, the top panel 60 is in airtight contact with the top edge 90 and is secured by a pin-in-hole engagement means 100. The pins 102 are preferably mounted on the top panel 60, while the holes 104 are placed in the top edge 90 in positions that are aligned with the pins 102 so that these components may be mutually engaged. Such engagement may be defeated so as to open the top panel 60 for replacement of the roll of bandages 20. The side wall 50 provides a tape exit door 110 and a flap 112, the later positioned in a side-by-side, and spaced apart position with respect to the side wall 50 and provides a tape dispensing cutter or cutoff means 114. The tape exit door 110 provides one or more flexible lips 116 enabled for tape sliding contact with the roll of bandages 20 which comprises a coiled tape carrier 22 mounted between the top and bottom panels 40, 60 with one end of the tape carrier 22 extending through the tape exit aperture 110 in a position for manually grasping and pulling the tape carrier 22 from the bandage case 10 for receiving each of a sequentially positioned series of bandages 24 mounted on the carrier 22, in turn, as the tape carrier 22 emerges from the tape cutoff means, preferably a cerated cutter as found in common use.

[0028] The bandages 24 are preferably fixed to the coiled tape carrier 22 with a contact adhesive of a type enabling the bandages 24 to be manually stripped from the tape carrier 22 as they are needed, after being severed from the roll 20. The cutoff means 114 is preferably of the type, as for instance, one finds on a common adhesive tape dispenser, for severing the tape carrier 22 and includes a cutoff means cover notch 116 adapted for shielding the cutoff means 114 when not in use. To effect this, the flap 112 is flexible and may be moved from the position shown in FIG. 1 to that of FIG. 2.

[0029] The tape exit aperture may include a pair of close fitting and flexible lips 116, as stated above, and these are positioned and adapted for air tight sliding contact with the tape carrier.

[0030] In FIG. 1, a single flexible lip 116 is shown. The lip(s) 116 are molded with spring tension for maintaining contact between the lips 116 or between the lip 116 and the sidewall 50, but of such contact force as to enable the coiled tape to slide through.

[0031] An indicia 120 is preferably printed on the tape carrier 22 for identifying each of the bandages 24 so that a user may determine the quantity of bandages 24 remaining in the bandage case 10. To this point, the indicia 120 is preferably a sequence of numerals as shown in FIG. 5.

[0032] The bandages 24 each preferably includes a bandage adhesive strip 24' and a gauze pad 24'', the gauze pad preferably contains an antibiotic solution for application to a wound as is well known in the art.

[0033] While the invention has been described with reference to at least one preferred embodiment, it is to be clearly understood by those skilled in the art that the invention is not limited thereto. Rather, the scope of the invention is to be interpreted only in conjunction with the appended claims.

What is claimed is:

1. A dispensing apparatus comprising in combination: a bandage case and a roll of bandages, the bandage case including a case bottom panel and a side wall peripherally mounted integrally to the bottom panel, and a top panel extending from a tab mounted on the peripheral side wall at a living hinge adapted for folding the top panel into surface contact with a top edge of the peripheral side wall, the top panel thereby positionable in airtight contact therewith and secured by a pin-in-hole engagement means, the side wall providing a tape exit aperture comprising a pair of flexible lips enabled for tape sliding contact therewith and a tape cutoff means; the roll of bandages comprising a coiled tape carrier mounted thereon between the top and bottom panels, one end of the tape carrier extending through the tape exit aperture in a position for manually grasping and pulling the

tape carrier from the bandage case for receiving each of a sequentially positioned series of bandages, in turn as the tape carrier emerges from the tape cutoff means.

2. The apparatus of claim 1 wherein the bandages are fixed to the coiled tape carrier with a contact adhesive of a type enabling the bandages to be manually stripped from the tape carrier.

3. The apparatus of claim 1 wherein the tape cutoff means provides a cutoff means cover notch adapted for shielding the cutoff means when not in use.

4. The apparatus of claim 1 wherein the flexible lips are adapted for air tight sliding contact with the tape carrier.

5. The apparatus of claim 1 further comprising an indicia printed onto the tape carrier for identifying each of the bandages for enabling a determination of the quantity of the bandages remaining in the bandage case.

6. The apparatus of claim 1 wherein each of the bandages includes a bandage adhesive strip and a gauze pad, the gauze pad containing an antibiotic solution therein.

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