

Aug. 13, 1968

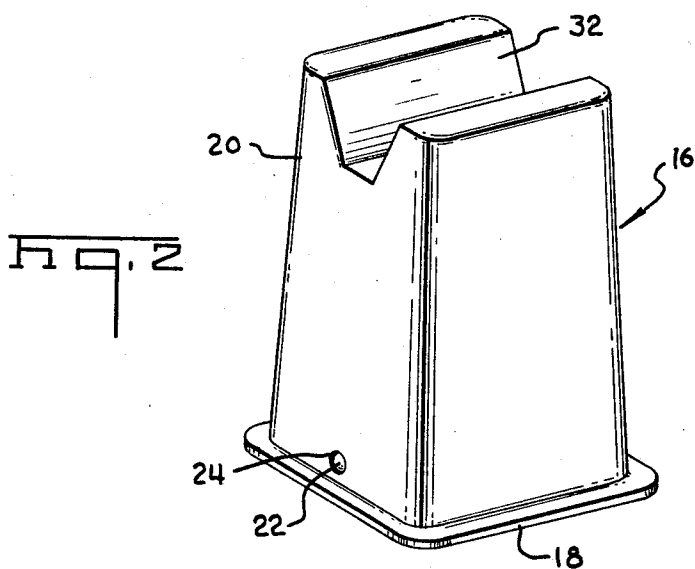
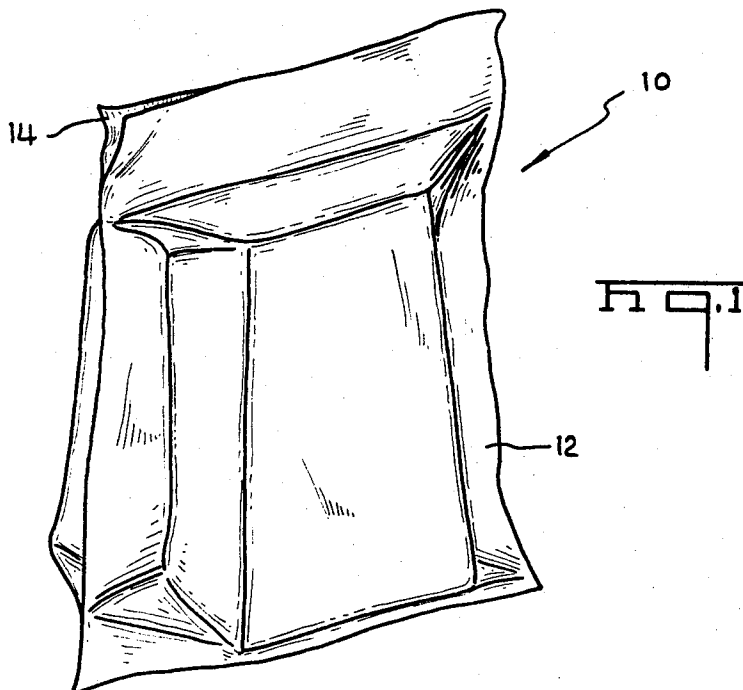
S. G. SHANNON ETAL

3,396,839

PACKAGING APPARATUS

Filed June 15, 1966

3 Sheets-Sheet 1



Aug. 13, 1968

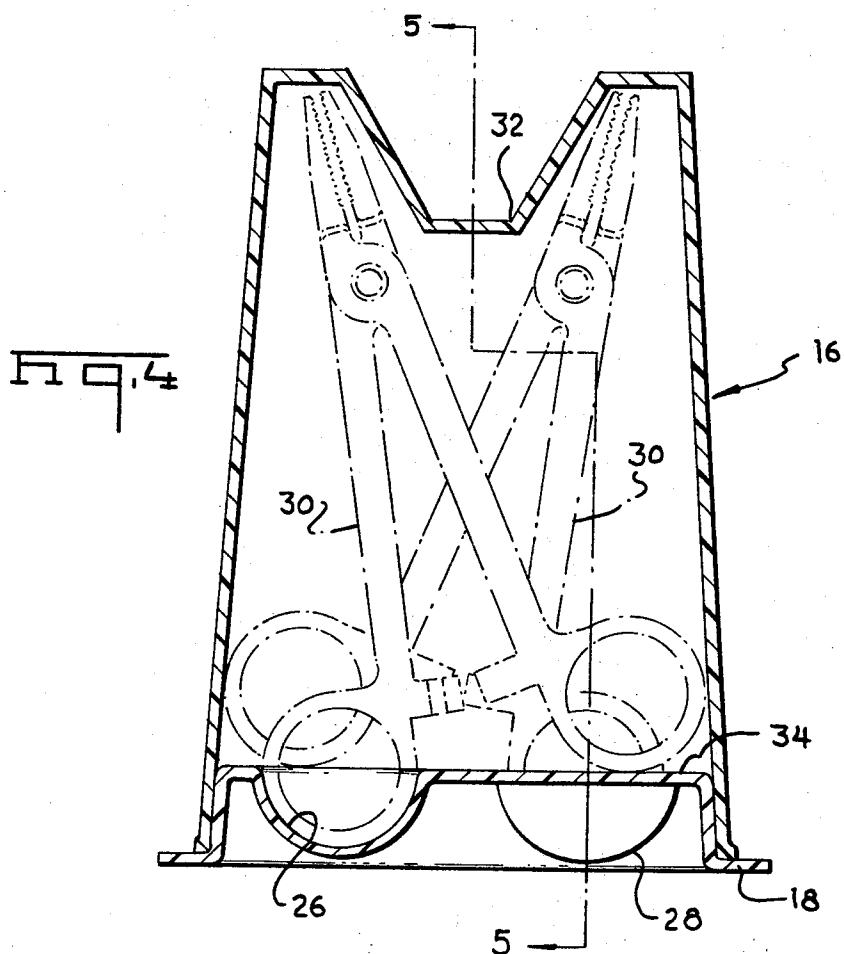
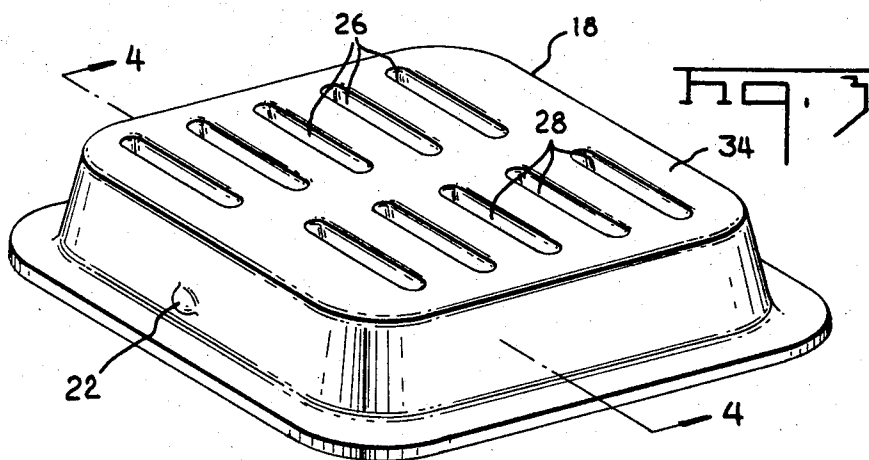
S. G. SHANNON ETAL

3,396,839

PACKAGING APPARATUS

Filed June 15, 1966

3 Sheets-Sheet 2



Aug. 13, 1968

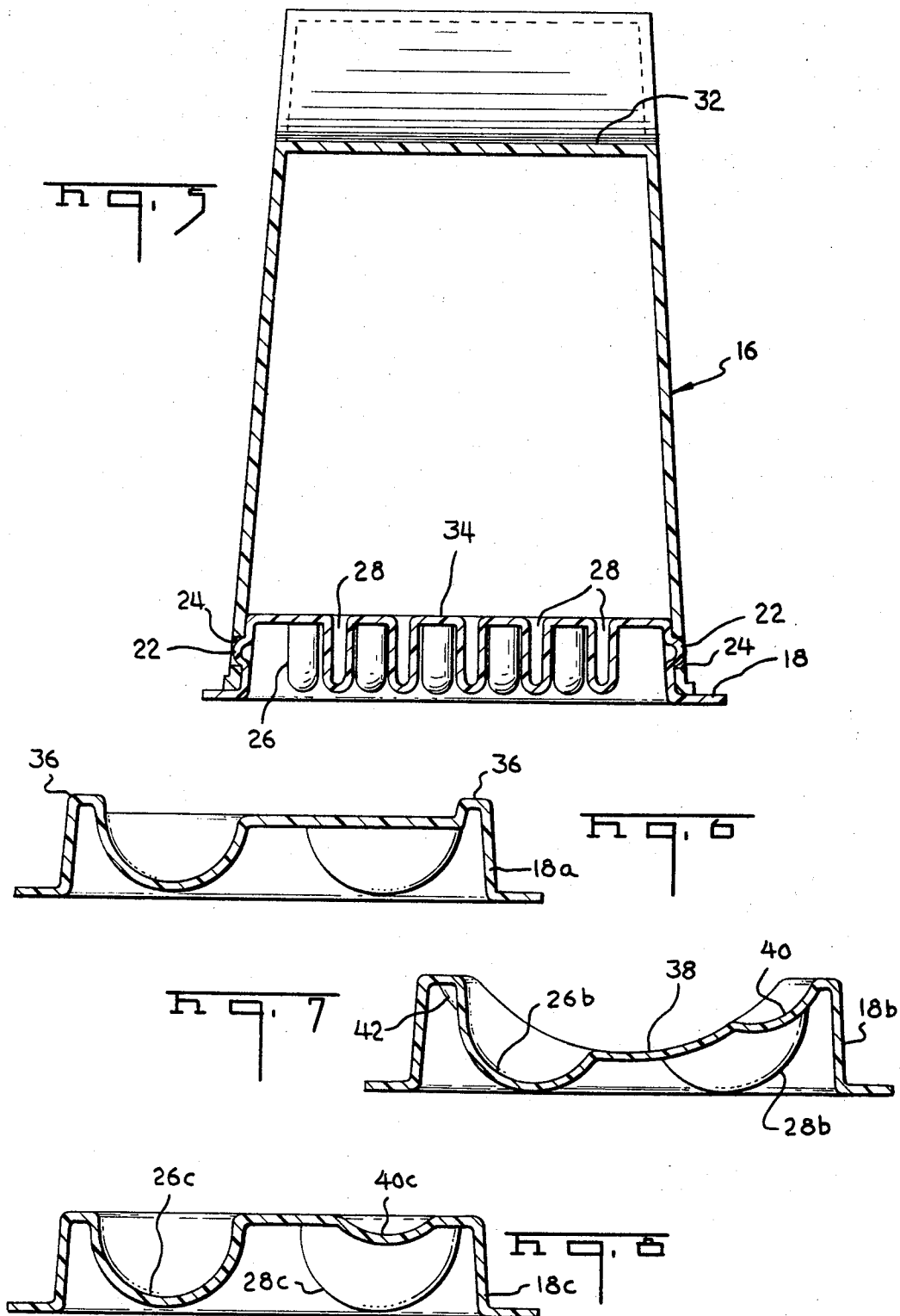
S. G. SHANNON ET AL

3,396,839

PACKAGING APPARATUS

Filed June 15, 1966

3 Sheets-Sheet 3



1

3,396,839

PACKAGING APPARATUS

Suel Grant, Shannon, and Norwood Claude Graeff, Harrisburg, Pa., assignors to AMP Incorporated, Harrisburg, Pa.

Filed June 15, 1966, Ser. No. 557,678

3 Claims. (Cl. 206—63.2)

ABSTRACT OF THE DISCLOSURE

An article is provided for packaging surgical instruments or the like. The package consists of a base member which supports the instruments and serves as a stand, a cover encloses the instruments and mates with the base member, and an outer bag capable of maintaining the instruments in a sterile condition.

In U.S. patent application Ser. No. 506,692 filed Nov. 8, 1965, and entitled "Ligating Hemostat," there is shown and described a hemostatic device which is operative to clamp a severed blood vessel during a surgical operation and to there after apply a tie to the vessel to effect a closure and a cessation of bleeding. The instant invention provides a packaging means for such hemostatic devices or similar articles and also provides a means whereby the hemostatic devices may be conveniently handled by an operating room nurse during a surgical operation.

It is therefore a principal object of the present invention to provide a packaging apparatus for hemostatic or the like devices.

A further object is to provide packaging apparatus for hemostatic or the like devices wherein the apparatus has further utility as a holder for such devices during a surgical operation.

Another object of the present invention is to provide simple and efficient means to facilitate the sterilization and handling of hemostatic or like devices.

Other objects and attainments of the present invention will become apparent to those skilled in the art upon a reading of the following detailed description when taken in conjunction with the drawings in which there are shown and described illustrative embodiments of the invention; it is to be understood, however, that these embodiments are not intended to be exhaustive nor limiting of the invention but are given for purpose of illustration in order that others skilled in the art may fully understand the invention and the principles thereof and the manner of applying it in practical use so that they may modify it in various forms, each as may be best suited to the conditions of a particular use.

In the drawings, in which like reference numerals refer to like parts:

FIGURE 1 is a perspective view of a package made in accordance with the teachings of the present invention;

FIGURE 2 is a perspective view of the packaging apparatus similar to FIGURE 1 but with the outer bag removed;

FIGURE 3 is a perspective view of the base portion of the package;

FIGURE 4 is a cross-sectional view taken in part along the line 4—4 of FIGURE 3 showing the base and cover of the package of the instant invention;

FIGURE 5 is a cross-sectional view taken along the line 5—5 of FIGURE 4; and

FIGURES 6—8 are cross-sectional views showing alternative configurations of the base portion of the package.

Turning now to the drawings and in particular to FIGURE 1, there is shown a package indicated generally at 10 having a sterilizing bag 12 on the outer surface thereof, said bag being preferably but not necessarily comprised of

2

two layers of filter paper, one coated with polyethylene for sealing purposes, the two layers of paper being heat sealed completely around its periphery. A tear corner 14 is provided whereby the two layers of paper may be grasped to effect a peeling operation and expose the contents within the bag 12.

In FIGURES 2 through 5 there can be seen the container 16 enclosed within the sterilizing bag 12. Container 16 comprises two separable parts, namely a base portion 18 and a cover 20. A pair of detents 22 are formed in opposite sides of the base portion 18 and mate in a pair of apertures 24 provided in the lower portion of cover 20. By means of the detents the base and cover are held together but may readily be separated to expose the contents of the container.

The base portion 18 has a series of grooves 26 and a series of grooves 28 formed in the upper surface thereof. Although five grooves are shown in each series this number may obviously vary as desired for a particular use. As can be seen in FIGURE 4 the grooves 26 and 28 are of arcuate configuration for receiving the handle portions of hemostatic devices 30 or the like, shown in phantom in FIGURE 4.

Each of the grooves 26 is laterally offset from each of the grooves 28 as can be seen in FIGURE 3. By reason of this offset the hemostatic devices will be alternately orientated, as shown in FIGURE 4, whereby each device may be conveniently grasped by a staff member during an operation. To aid in retaining the hemostatic devices in position during handling the cover 20 is provided with a recess 32 in the upper surface thereof which recess will fit between the nose portions of the devices.

The angle at which the hemostatic devices are disposed is dependent on the depth of the grooves 26, 28 since one handle of the devices will be disposed in the groove while the other handle of the devices will rest on the top surface 34 of the base 18. The width of the grooves 26 and 28 is approximately equal to the width of the handle portions of the hemostats. By reason of this the hemostats are held in the grooves by a light frictional force, which force will be sufficient to retain the hemostats in position prior to grasping by an operating room staff member.

The base 18 and cover 20 are preferably formed from a plastic material which would be inexpensive to produce and which could be discarded after a single use. By way of example but not by limitation the cover may be injection molded from polyethylene while the base may be heat vacuum formed from cellulose acetate butyrate sheets.

Turning now to FIGURE 6 there is shown a base 18a which is identical to the previously described base 18 with the exception that a pair of shoulders 36 are formed along two top edges of the base, the shoulders serving to increase the rigidity of the base, to increase the mating length between the base and the cover for a firmer engagement, and to provide a positioning abutment for the handles of the hemostats. In the latter instance the handles will be engaged by the shoulders to thereby aid in steadying the hemostats in their position.

In FIGURE 7 there is shown a further modification of the base portion of the container. The base 18b has a dished upper surface 38. Series of grooves 26b and 28b are provided and correspond to the grooves 26 and 28 previously described. A series of shallow grooves 40 are provided in alignment with the grooves 26b and a second series of shallow grooves 42 are provided in alignment with the grooves 28b.

The shallow grooves 40 and 42 will provide locating means for the "raised" handle of the hemostats to thereby securely hold the hemostats in position.

In FIGURE 8 there is shown a further modification of the base indicated as 18c. The base 18c is similar to the

3

base 18 previously described with the exception that the grooves 26c and 28c are somewhat deeper than the corresponding grooves 26 and 28 to thereby provide additional support for the hemostats. Shallow grooves 40c are provided in alignment with the deeper grooves 26c and shallow grooves (not shown) are provided in alignment with the deeper grooves 28c. These shallow grooves provide additional support for the raised handles similarly as the grooves 40, 42 described in connection with FIGURE 7.

The package described above is capable of being sterilized in its completely assembled condition. After sterilization and when ready for use the outer bag 12 will be opened and the cover 20 of the container will be removed from the base. The base 18, with the hemostatic devices assembled thereon, may then be either held in the hand or placed on a suitable table to provide a holder or stand for the devices during the surgical operation.

Changes in construction will occur to those skilled in the art and various apparently different modifications and embodiments may be made without departing from the scope of the invention. The matter set forth in the foregoing description and accompanying drawings is offered by way of illustration only. The actual scope of the invention is intended to be defined in the following claims when viewed in their proper perspective against the prior art.

What is claimed is:

1. A sterile package comprising a plurality of surgical

4

instruments, said instruments having handle portions and nose portions, means to hold said instruments in spaced relation, said holding means being in contact with the handle portions of said instruments and causing divergence of the nose portions of said instruments, cover means extending over the nose portions of said instruments, and bag means enclosing said cover means, holding means, and instruments, said bag means having a peripheral seal completely therearound.

2. A sterile package as set forth in claim 1 wherein said holding means comprises a surface having a plurality of arcuate grooves disposed therein, said grooves serving to engage said instrument handle portions.

3. A sterile package as set forth in claim 2 wherein said grooves are regularly spaced across said surface and are alternately deep and shallow whereby each said instrument is disposed at an acute angle to each adjacent instrument.

References Cited

UNITED STATES PATENTS

2,151,610	3/1939	Moore	206—43
2,955,705	10/1960	Krueger et al.	206—43
2,966,156	12/1960	Scholfeld	206—73
3,116,828	1/1964	Glassman	206—72
3,280,971	10/1966	Regan	206—63.3

WILLIAM T. DIXSON, JR., *Primary Examiner*.