Nov. 26, 1968 R. F. COULOMBE 3,412,851

SURGICAL GLOVE WRAPPER

Filed July 6, 1967 2 Sheets-Sheet 1

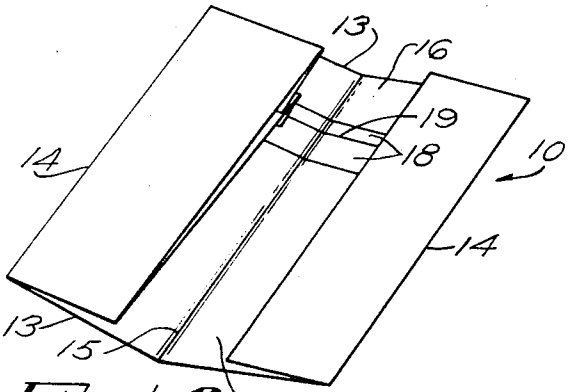


FIG. 2

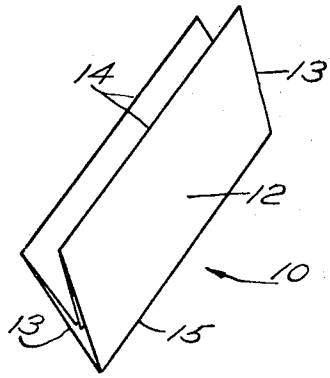


FIG. 1

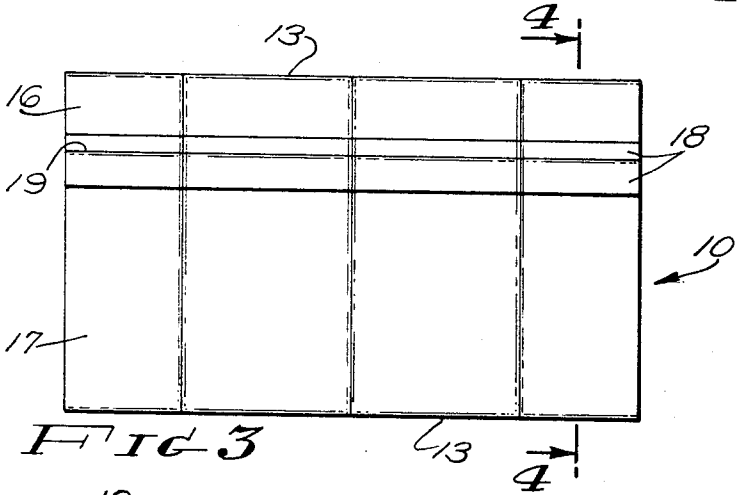


FIG. 3

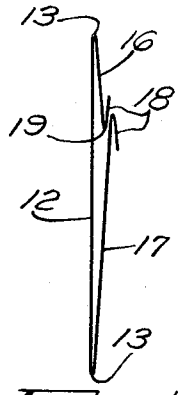


FIG. 4

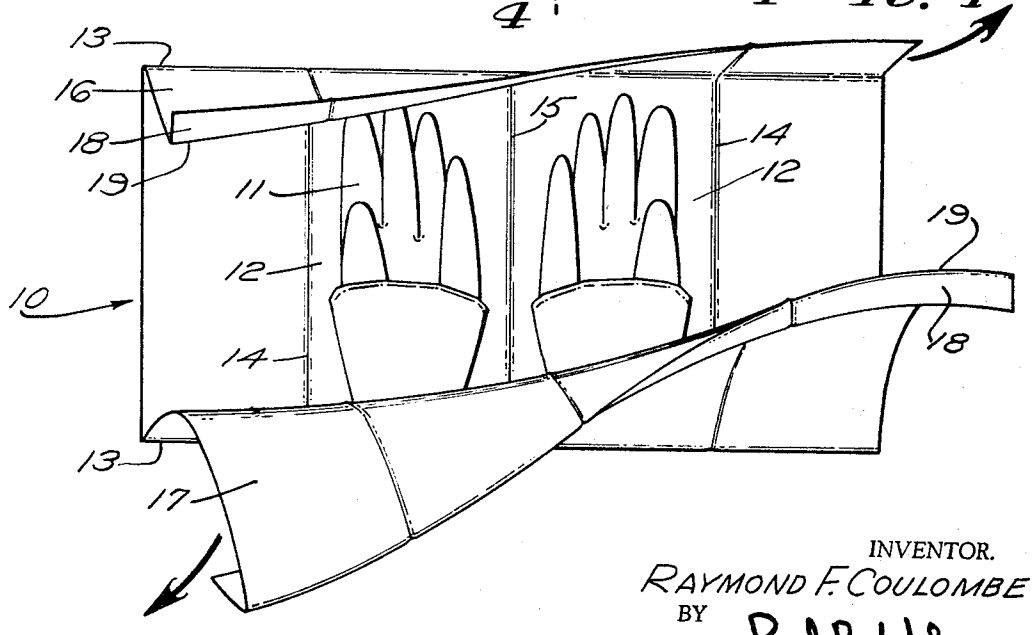


FIG. 5

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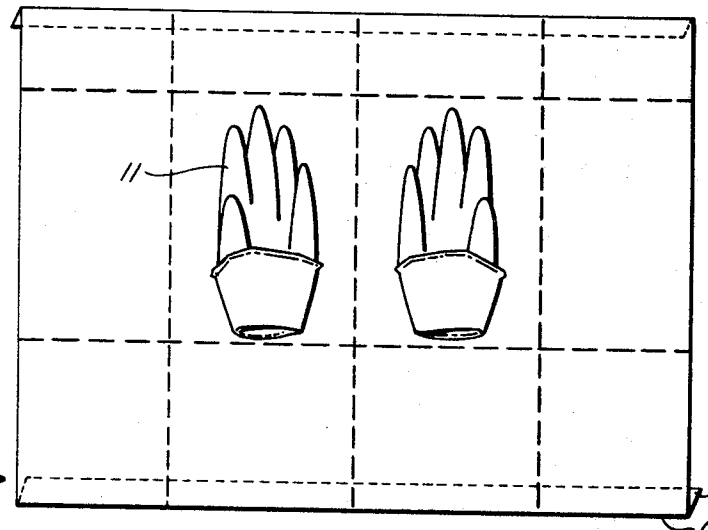


FIG. 6

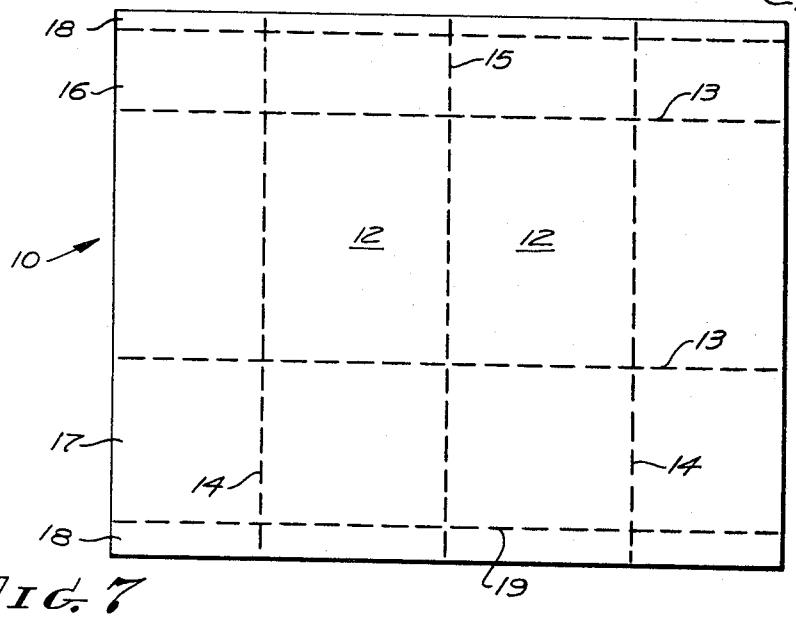


FIG. 7

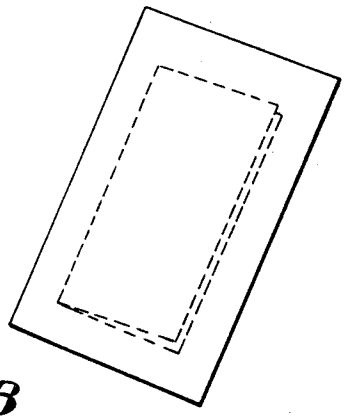


FIG. 8

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SURGICAL GLOVE WRAPPER

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3 Claims. (Cl. 206—63.2)

ABSTRACT OF THE DISCLOSURE

A sterile inner wrapper for surgeon's gloves folded so that it will not "pop" open, and having finger engageable tabs for manipulating the wrapper so that the hand will not pass over the sterile zone above the gloves during the opening procedure.

This invention generally relates to wrappers for surgeon's gloves.

Surgical gloves are commonly supplied in a package including an outer wrapper or envelope, and a sterile inner wrapper. The wrappings are preferably made from material that is permeable to sterilizing gases, but impermeable to bacteria so that the gloves can be sterilized in the package by contact in a sterilizing vessel with with steam or other sterilizing gases such as ethylene oxide. The outer wrapper, of course, becomes recontaminated by normal handling and is in most instances removed before delivery of the gloves to the operating room for donning by the surgeon.

Removal of the gloves from the inner wrapper entails the use of procedures and techniques that must be carefully executed to avoid contact of the surgeon's hands, or those of his helper, with the exterior glove surface. Not only is the touching of the exterior of the glove unpermitted, but additionally, the sterile zone over the gloves must not be entered by a bacteria carrying foreign object, since even the casual passing of a hand over the gloves might result in contamination.

Obviously, it is extremely important that the unwrapping procedure be capable of exact and delicate control. Wrappers that tend to "pop" open may result in the unexpected exposure of the surgeon's gloves to contamination by a hand errantly in the sterile zone.

It is also important that the inner wrapper be capable of maintaining the glove sterile before the gloves are actually removed. To this end, it is necessary that the inner wrapper be constructed to remain closed and not be inadvertently opened by the internal stresses that result from folds or wrinkles in the wrapping material.

It is, therefore, an object of this invention to provide a surgeon's glove wrapper that will not "pop" open. It is further an object to provide such a wrapper that can be easily manipulated and controlled during the opening procedure so that hands or other contaminating objects will not errantly and inadvertently pass through the sterile zone above the surgeon's gloves. A still further object is the provision of such a wrapper that will form, with an outer wrapper, a compact package for surgical gloves. Yet another object is the provisioning of such a wrapper that can be easily and efficiently formed by mechanical folding means.

In attaining these objects we have provided a uniquely folded compact inner wrapper for surgical gloves that provides sterile glove containing areas, and has opening tabs

by which the manipulation of the wrapper during the opening procedure can be delicately controlled.

The invention will be more readily understood with reference to the accompanying drawings showing a preferred embodiment thereof, and in which:

FIGURE 1 is a view in perspective showing the inner wrapper of the invention as it would be seen prior to opening for removal of gloves contained therein;

FIGURE 2 is a similar view showing the inner wrapper partially opened;

FIGURE 3 is a plan view, continuing in sequence of the opening procedure, showing the inner wrapper as it would be laid out on a table prior to the exposure of the surgeon's gloves;

FIGURE 4 is a view in cross-section taken along line 4—4 of FIG. 3;

FIGURE 5 is a view in perspective looking down on the inner wrapper as it is being opened to expose the surgical gloves contained therein;

FIGURE 6 is a view similar to FIG. 5 showing the completely opened inner wrapper;

FIGURE 7 is a top plan view of the inner wrapper showing details of the fold lines thereon; and

FIGURE 8 is a view in perspective showing a package for surgical gloves including an outer wrapper and an inner wrapper shown in dotted lines.

Referring now to the drawings, inner wrapper **10** is comprised of paper or the like of the type that is commonly used to wrap sterile items, and which is permeable to sterilizing gases, but not to bacteria. Surgeon's gloves **11** are placed in glove containing areas **12**. These areas are defined by a first set of parallel fold lines **13** bounding the top and bottom thereof and a second set of parallel fold lines **14** running substantially perpendicular to the first set. Fold line **15** divides the glove containing area into two portions for right and left hand gloves.

Upper margin portion **16** and lower margin portion **17** are designed to mutually overlap over the glove containing area when folded. It is preferable, as depicted, to have one margin portion (in this case, margin portion **17**) longer than the other portion so that it will exert a greater moment on the lower and shorter margin when the two are brought into mutually overlapping relationship with the longer margin positioned above the shorter margin at the overlapping area. This arrangement contributes the important advantage of maintaining the inner wrapper closed when it is removed from the outer wrapper or envelope. Fold lines **13** and **14** provide overlying folded portions of sufficient length so that the wrapper will assume a normally flat profile at all stages of unfolding process. Not only will this arrangement maintain the wrapper tightly closed when it is in the first unfolded position as shown in FIG. 2; but also, any tendency of the wrapper to open when it is in the flat position of FIG. 3, will be eliminated.

Fold line **19** provides tab portion **18** on the edges of the upper and lower margin portions. As can best be seen in FIG. 5, the tab portions can be grasped between the thumb and forefinger of a person opening the inner wrapper and pulled in opposite directions, as depicted by the arrows. Thus, the inner wrapper shown provides the advantage of enabling an opening technique to be used that will eliminate the possibility of an errant hand entering the sterile zone above the gloves.

Inasmuch as the heretofore described wrapper has fold lines running at right angles to the edges thereof, the

wrapper can easily be formed by mechanical means, thus giving another important advantage to the invention.

I claim:

1. An inner wrapper for surgical gloves comprising a single sheet of sterilizable paper or the like, folded to provide two sterile glove containing areas formed by a first set of straight parallel fold lines, said first set of fold lines being substantially perpendicular to the edge of said paper and bounding the top and bottom of the glove containing areas and a second set of fold lines substantially perpendicular to said first set and bounding the sides of said area, said second set being mutually parallel to a center fold line defining two glove containing areas within the bounds of said first and second sets of fold lines, the margin portions above and below said first set of parallel fold lines being partially mutually overlapped above the glove containing area, said margin portions being provided with extending finger engageable tab means formed by folded edge portions on said margin portions, the tab means formed thereby being only partially overlapped whereby the wrapper can be opened by grasping the tabs at opposed end portions adjacent the edges of said paper.

2. The inner wrapper for surgical gloves, as recited in claim 1, wherein one of said margin portions formed above and below said first set of parallel fold lines is substantially longer than the other, said longer margin portion being of sufficient length to maintain the inner wrapper closed when it is not otherwise confined.

3. A wrapper for surgical gloves comprising an outer wrapper formed as an envelope and an inner wrapper comprising a single sheet of sterilizable paper or the like, folded to provide two sterile glove containing areas formed by a first set of parallel fold lines, said first set of fold lines being substantially perpendicular to the edge of said paper and bounding the top and bottom of the glove containing areas and a second set of parallel fold lines substantially perpendicular to said first set and bounding the sides of said area, said second set of lines being mutually parallel to a center fold line defining two glove containing areas within the bounds of said first and second sets of fold lines, the margin portions above and below said first set of parallel fold lines being partially mutually overlapped above the glove containing area, said margin portions being provided with extending finger engageable tab means formed by folded edge portions on said margin portions, the tab means formed thereby being only partially overlapped whereby the wrapper can be opened by grasping the tabs at opposed end portions adjacent the edges of said paper.

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