

Dec. 28, 1965

P. C. REILLY
WRAPPER

3,225,920

Filed April 30, 1964

2 Sheets-Sheet 1

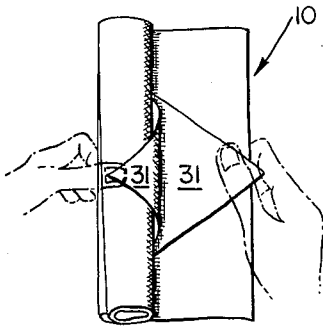


FIG. 1

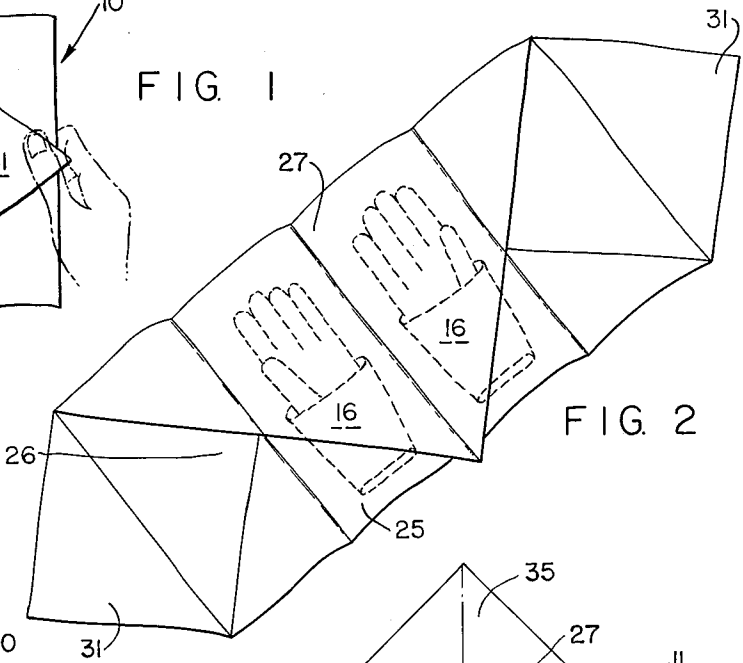


FIG. 2

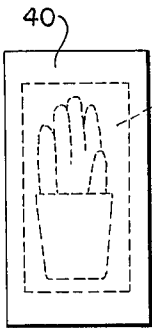


FIG. 12

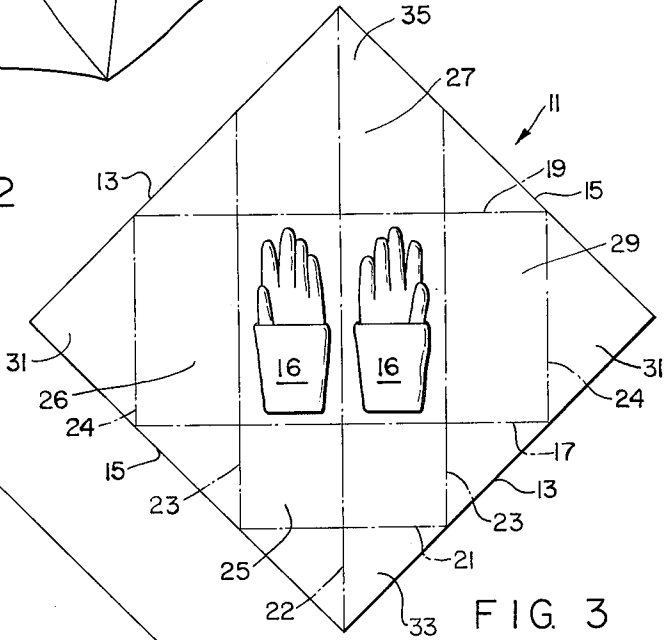


FIG. 3

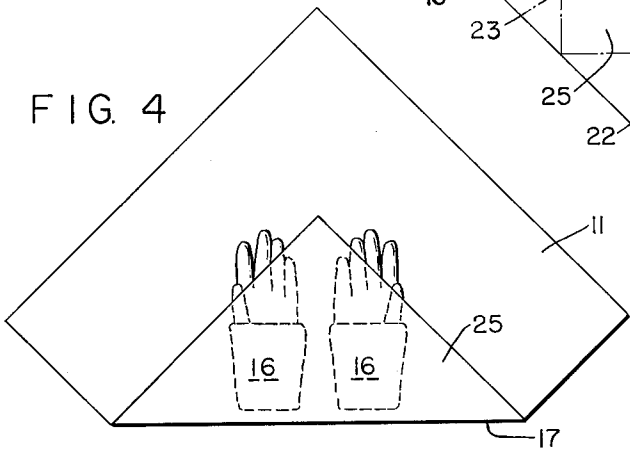


FIG. 4

INVENTOR.
PAUL C. REILLY
BY *Robert J. Doherty*
ATTORNEY

Dec. 28, 1965

P. C. REILLY

3,225,920

WRAPPER

Filed April 30, 1964

2 Sheets-Sheet 2

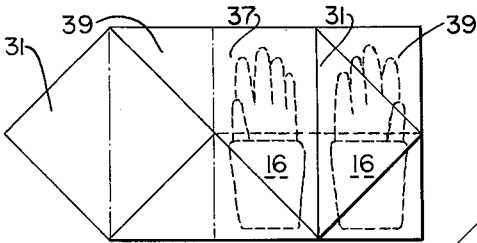


FIG. 8

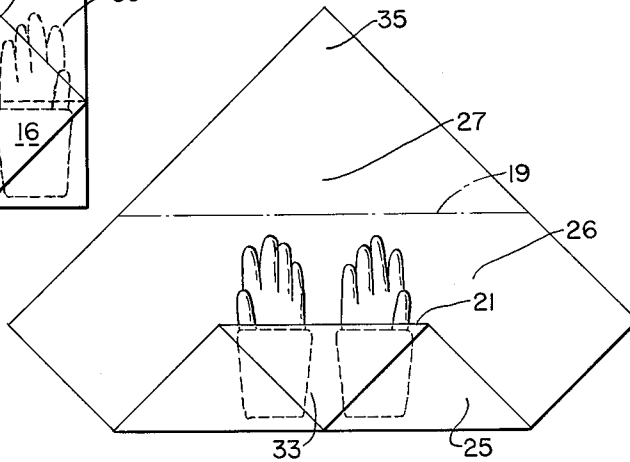


FIG. 5

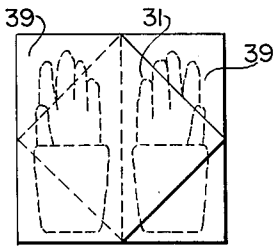


FIG. 9

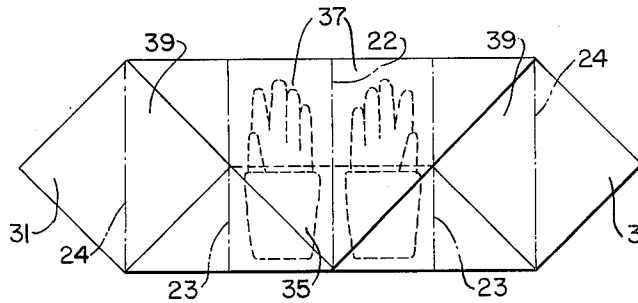


FIG. 6

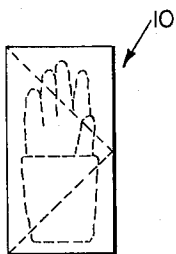


FIG. 10

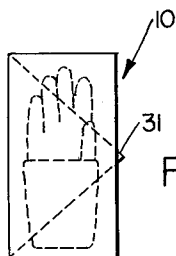


FIG. 11

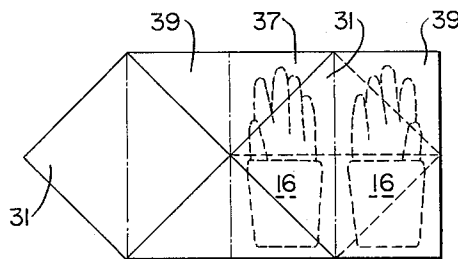


FIG. 7

INVENTOR.

PAUL C. REILLY

BY

Robert J. Doherty

ATTORNEY

1

3,225,920 WRAPPER

Paul C. Reilly, Milford, Conn., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware

Filed Apr. 30, 1964, Ser. No. 363,715

8 Claims. (Cl. 206—63.2)

This invention relates to a novel wrapper for gloves and the like and more particularly to a wrapper for sterile surgical gloves which may be easily and quickly opened while maintaining the sanitary conditions of the surgical gloves contained therein.

Today's hospital standards require that surgical gloves and the like be maintained in a sterile condition during storage and prior to their actual use. It is therefore necessary that these gloves be sterilized prior to their use and in those cases where such gloves are not utilized immediately following sterilization, it is also necessary that the gloves be so maintained until they are used. Many wrappers have thus been devised which will satisfactorily maintain surgical gloves in a sanitary and sterile condition during their storage. However, many of these prior surgical glove packages have provided inadequate inasmuch as upon the opening thereof, such packages fail to maintain the gloves in a sanitary and sterile condition until use soon thereafter. Two major faults of the prior art packages were that they were either difficult to open or they did not provide a sufficiently large wrapper area bordering the gloves themselves. Thus if the person opening the wrapper finds this procedure either difficult or complicated, there is the increased likelihood that the gloves may be dropped or come in contact with a non-sterile person or object and be subject to contamination as a result of the awkward handling. Or in the other case wherein the package is of insufficient size to provide an adequately large protective border extending about the gloves when the gloves are resting upon the fully opened wrapper, there is an increased likelihood of contamination from the areas of a non-sterile supporting surface adjacent the peripheral edges of the fully opened wrapper. Also many wrappers which do maintain a large enough area of wrapper surrounding the gloves are not entirely satisfactory in that they require that the package be twisted and turned during its opening or require that its several overlapping folds be opened from several different directions, therefore causing an unnecessarily large amount of air movement which is conducive to contamination of the gloves. Another common fault of prior wrappers is the lack of convenient points or portions of the wrapper by which it may be grasped for ease in transporting the fully or partially opened wrapper and the gloves contained therein from place to place without increasing the likelihood of contamination.

It is therefore an object of the present invention to provide a novel wrapper for surgical gloves and the like which obviates the above discussed shortcomings of prior art wrappers and which wrapper is easy to open, convenient to use, and which maintains the sanitary and sterile conditions of the gloves contained therein.

Another object of the present invention is that of providing a quick-opening wrapper for surgical gloves and the like, which wrapper upon each stage of its unfolding maintains the sanitary condition of the wrapped gloves and which also affords means by which the gloves may be held or transported by an assistant preliminary to being donned by a surgeon or other ultimate user.

A further object of the present invention is to provide a package which may be conveniently used for the storage of surgical gloves and the like, which package is provided with a tear-away outer wrap enclosing a quick-

2

opening inner wrapper which outer wrap surrounds and aids in maintaining the surgical gloves in a sterile condition during storage.

With the above and other objects in view, and as will appear hereinafter, the nature of the invention will be more clearly understood by reference to the following detailed description and the accompanying drawings.

FIGURE 1 is a perspective view of the present quick-opening wrapper in operative position to be quickly opened by the pair of hands shown in dot-dash lines;

FIGURE 2 is a perspective view of the quick-opening wrapper shown in FIGURE 1 having been unfolded and opened to an initial or primary stage of opening with the surgical gloves being shown completely covered by unopened folds of wrapper material;

FIGURE 3 is a top plan view of the completely opened wrapper of the present invention and showing the position of the gloves within the wrapper;

FIGURE 4 is a plan view of a partially folded wrapper after the first folding operation has taken place and showing the relative positioning of the gloves therewith;

FIGURE 5 is another plan view of the wrapper and gloves similar to FIGURE 4 showing the wrapper configuration after the second folding step;

FIGURE 6 is another plan view of the wrapper and surgical gloves contained therein similar to FIGURE 5 of the drawings and wherein a third folding operation has taken place;

FIGURE 7 is another plan view of the wrapper and gloves contained therein similar to FIGURE 6 but wherein the effect of an additional folding step has been shown;

FIGURE 8 is another plan view of the wrapper and gloves contained therein similar to FIGURE 7 of the drawings and shows the configuration of the wrapper after a further folding step has taken place;

FIGURE 9 is another plan view of the wrapper and gloves contained therein similar to FIGURE 8 of the drawings but showing an even further folding step;

FIGURE 10 is a plan view of the completely folded wrapper showing the therein contained superposed gloves;

FIGURE 11 is a plan view of a completely folded wrapper similar to that shown in FIGURE 10 and embodying a preferred construction having finger grasping tabs extending beyond the main portion of the wrapper; and,

FIGURE 12 is a plan view of the completely folded wrapper of FIGURE 10 enclosed within a tear-away outer enclosure.

Referring to the drawings and more particularly to FIGURE 3 thereof, there is shown a sheet 11 of foldable material such as porous paper or the like having opposed side edges 13 and opposed end edges 15 which in part comprise the wrapper 10 of the present invention. Although the sheet has been shown for purposes of illustration as being rectangular, this showing is not intended to be limitative, as other shapes or modifications other than those of rectangular configuration are satisfactory so long as they fulfill the requirements necessary for obtaining quick-opening characteristics and satisfactorily cover the surgical gloves so as to maintain them in a sterile condition upon partial opening as will hereinafter be brought out. A pair of surgical gloves, each glove represented by the numeral 16, is placed in the vicinity of the center portion of the sheet 11. The bottom portion of the sheet 11 is then upwardly folded along a horizontal fold line 17 as best pictured from FIGURE 4 of the drawings so as to partially overlie the surgical gloves 16. Other horizontal fold lines 19 and 21 are provided in the sheet of foldable material 11 or subsequently folded by further operation as depicted in FIGURES 4 through 6 of the drawings. In addition to these horizontal fold lines 17, 19 and 21, there are pro-

vided central, intermediate and end vertical fold lines 22, 23 and 24 respectively. As with the horizontal fold lines, these vertical fold lines are preferably subsequently impressed upon an unfolded sheet during the further folding operation as shown more clearly in FIGURES 7 through 10 of the drawings. The sheet 11 may, however, be prefolded to the desired extent.

Preferably, after placing the gloves 16 on the unfolded sheet 11, the various folding steps are performed as illustrated in FIGURES 4 through 10 of the drawings. Thus, as previously set forth and shown by FIGURE 4, a lower portion of the sheet 11 is folded up about horizontal fold lines 17 so as to define a first panel 25 which at least partially overlies the surgical gloves 16. An upper portion of the first panel 25 is then downwardly folded about horizontal fold line 21 so as to define a secondary tab 33. The top portion of the sheet 11 is then downwardly folded as best shown in FIGURE 6 of the drawings about horizontal fold line 19 thus forming a second panel 27 which in part overlies the secondary tab 33 of the first panel 25. The portion of the second panel 27 which overlies the secondary tab 33 forms another secondary tab which is designated by the reference numeral 35 and as shown in FIGURES 5 and 6 of the drawings. The area of the sheet 11 between the first panel 25 and the second panel 27 forms an intermediate panel 26 having a generally rectangular central panel portion 29 having a primary tab 31 extending horizontally from each end thereof.

It is apparent from a comparison of FIGURES 2 and 6 of the drawings that the partially folded wrapper depicted in FIGURE 6 presents approximately the same physical appearance as the partially unfolded wrapper of FIGURE 2. That is, the stage of unfolding as shown in FIGURE 2 and the stage of folding as shown in FIGURE 6 are substantial equivalents of each other. This initial stage of unfolding as shown by FIGURE 2 presents a wrapper configuration in which the sterility of the enclosed gloves 16 is maintained by the overlying and enclosing panels 25, 26 and 27.

In further folding the wrapper about the vertical fold lines 22, 23 and 24 as best shown in FIGURES 6 through 10 of the drawings, the initial folding step is best shown by the transition between FIGURES 6 and 7 of the drawings wherein the right-hand primary tab 31 and a part of central panel portion 29 as shown in FIGURE 6 is folded about vertical fold line 23 to the position as depicted in FIGURE 7 of the drawings. As best shown in FIGURE 8 of the drawings, the right-hand primary tab 31 previously folded about vertical fold line 23 so as to overlie in part the left-hand glove 16 as shown thus in FIGURE 7 is then folded to the right to overlie in part the glove 16 to the right of FIGURE 8. The several vertical fold lines 22, 23 and 24 cooperate to form inner panels 37 and outer panels 39 as best shown in FIGURE 6 of the drawings. These panels are generally rectangular and their cooperation in relationship to each other will more clearly be brought out in the additional descriptive matter. The portion of the wrapper to the left of the intermediate vertical fold line 23 as shown in FIGURES 6 through 8 of the drawings is then folded to the right as best shown in FIGURE 9 so that the primary tabs 31 are engaged in superposed contiguity with each other. The final vertical fold is then accomplished about central vertical fold line 22 as best shown in the transition between FIGURES 9 and 10 of the drawings wherein the outer panels 39 are placed in superposed relationship to each other. In the completely folded condition as depicted by FIGURE 10 of the drawings, the inner panels 37 are also in superposed relationship to each other. They are, however, not in contiguity since the outer panels 39 are foldably placed therebetween as well as portions of the primary tabs 31.

Another embodiment of the invention is shown in FIG-

URE 11 wherein the primary tabs 31 extend beyond the perimeter of the wrapper defined by the superposed outer panels 39 in partial contact with each other. By reason of their extension beyond the outer panels 39, the ends of the primary tabs 31 are more easily grasped by the fingers when it is desired to open the package and in a manner that will be hereinafter brought forth more clearly.

The quick-opening wrapper as shown in either FIGURE 10 or 11 of the drawings and having a pair of surgical gloves or the like contained therein are then placed in an outer enclosure 40 of paper or the like which may be of the tear-away type. A suitable outer enclosure 40 may comprise two sheets of porous paper or the like which are provided with a perimetral edge of adhesive and then are secured together about said perimetral edge with the inner wrapper and gloves being surrounded thereby.

The complete glove wrap including the outer enclosure 40, the inner wrapper and the contained gloves is then preferably sterilized in the known manner such as by steam or suitable chemical means. In this sterile condition the complete wrap is then shipped to the ultimate user. The unwrapping procedure is as follows: The outer enclosure 40 is torn away thus permitting access to the inner wrapper and gloves as best shown in FIGURE 1 of the drawings. Each end tab 31 is grasped between opposite thumb and forefingers and drawn apart so as to quickly and easily open the inner wrapper to the condition as depicted in FIGURE 2 of the drawings. It will be noted that in this stage of unfold, the novel wrapper of the present invention provides adequate cover through the interaction of panels 25, 26 and 27 so as to maintain the glove 16 in a sterile condition. The secondary tab 33 and the secondary tab 35 may then be together grasped and the entire wrapper transported by an assistant to a place where the surgeon then dons the gloves. Alternatively, the wrapper may be completely opened from this position shown in FIGURE 2 by respectively grasping the secondary tabs 33 and 35 in either hand similar to the showing in FIGURE 1 of the drawings and by pulling apart these secondary tabs until the full extent of the sheet 11 is displayed, thus gaining immediate access to the gloves 16. Thus it may be seen that by merely using two successive opening movements, the novel wrap of the present invention may be quickly displayed to its full extent. This operation is extremely quick, simple and may be performed in two stages so as to maintain the gloves in a sanitary condition in the partially opened condition. Thus by merely pulling on the primary tabs 31, the wrap is opened to its full lateral extent. The second stage of opening is then performed by grasping the secondary tabs 33 and 35 and opening the wrap to its full vertical extent which would then completely uncover the gloves 16. Of course this operation may be carried out in two stages where it is not desirable to immediately utilize the gloves after they have been opened to their initial stage as shown in FIGURE 2 of the drawings.

It should also be noted that in the embodiment shown in FIGURE 11 of the drawings the extension of the primary tabs 31 beyond the wrapper perimeter as defined by outer panel 39 makes it more easy to gain access to these primary opening tabs as well as making the operation more obvious to those charged with the task of opening the wrapper. Thus with an initial quick glance, the surgeon or his assistant immediately can determine the procedure in which the wrapper of the present invention is opened. Furthermore, the primary tabs 31 may be each grasped by the user and thus further serve as a convenient means by which to transport the quick-opening wrapper from one place to another after it has been removed from its outer enclosure 40. Also by folding the secondary tab 33 so as to overlie portions of the first panel 25 and the placement of the

5

secondary tab 35 thereover, there is formed a further convenient structure presented in the initially opened stage as shown in FIGURE 2 of the drawings by which the glove wrapper of the present invention may be additionally transported from one location to the other with reduced danger of contamination of the sterile gloves 16. Through this additional structure the quick opening of the wrapper from its initial stage of opening as shown in FIGURE 2 to that of being completely unwrapped as shown in FIGURE 3 is further facilitated. Thus the two secondary tabs 33 and 35 are both positioned in proximity to each other so that the user may easily grasp one of these secondary tabs in respective hands and then by a simple opening movement fully expose the gloves for use.

Thus it is believed obvious from the foregoing that the present novel wrapper obviates the difficulties inherent in the prior art wrappers while providing a quick opening package which maintains the necessary sterile conditions of the surgical gloves. This novel wrapper may also be unfolded in two stages thus reducing the likelihood of contamination of the gloves while in a partially opened position. The manner in which the wrapper is opened is extremely simple and thus obviates the possible contamination of the gloves due to awkward handling of the wrapper. The particular manner in which the folded portions of the present wrapper cooperate so as to produce an extremely simple and extremely quick-opening wrapper which also maintains the necessary sterile conditions of the surgical gloves presents a clear advance over the prior art wrappers hitherto known and used. Although various modifications have been described in order to more clearly illustrate the same, the invention is not limited to the specific modifications which have been given for the purposes of illustration only and is to be limited only in accordance with the appended claims; for example, the wrapper disclosed and set forth could have utility in packaging items presenting physical characteristics similar to those presented by surgical gloves.

I claim:

1. A package including an outer tear-away enclosure and an inner wrapper having a pair of surgical gloves or the like enclosed thereby, said inner wrapper comprising a rectangular sheet of foldable material having opposed side edges and opposed end edges adjoining said side edges, said sheet having first, second and third horizontally disposed fold lines diagonal to and extending between a side edge and its horizontally opposed end edge, said first and second diagonal lines dividing said sheet into first, central and second panels, said central panel having a major portion of generally rectangular configuration with a primary tab horizontally extending from each end thereof, said third horizontally disposed fold line wholly within said first panel and forming a secondary tab thereon, said second panel having a peripheral portion defined by a side edge and its horizontally opposite end edge and forming a secondary tab, said secondary tabs being in generally superposed contiguous relationship with each other, a plurality of vertically disposed fold lines including a central, end and intermediate fold lines, said vertical end fold lines defining the extent of said primary tabs, said central and said intermediate vertical fold lines dividing the wrapper into a plurality of generally rectangular secondary panels composed of inner panels and an outer panel adjoining each of said inner panels, each outer panel overlying its adjoining inner panel, a pair of said surgical gloves and the like enclosed by said panels and in full contact with respective said inner panels and said outer panels in superposed relationship to each other with said primary tabs in generally superposed contiguous relationship between said outer panels.

2. A quick-opening wrapper for packaging surgical gloves and the like comprising a sheet of foldable mate-

6

rial having opposed peripheral side edges and opposed peripheral end edges adjacent said side edges, said sheet having first, second and third horizontally disposed fold lines diagonal to and extending between a side edge and its horizontally opposed end edge, said first and second diagonal lines dividing said sheet into first, central and second panels, said central panel having a major portion of generally rectangular configuration with a primary tab horizontally extending from each end thereof, said third horizontally disposed fold line wholly within said first panel and forming a secondary tab thereon, said second panel having a peripheral portion defined by a side edge and its horizontally opposite end edge and forming a secondary tab, said secondary tabs being in at least partial opposed contiguity with each other, and a centrally disposed generally vertical fold line dividing the wrapper into main sectors which main sectors are in opposed relationship to each other with said primary tabs being in at least partial opposed contiguity with each other and in finger graspable relationship with said opposed main sectors.

3. A quick-opening wrapper for packaging surgical gloves and the like comprising a rectangular sheet of foldable material having opposed side edges and opposed end edges adjoining said side edges, said sheet having first, second and third horizontally disposed fold lines diagonal to and extending between a side edge and its horizontally opposed end edge, said first and second diagonal lines dividing said sheet into first, central and second panels, said central panel having a major portion of generally rectangular configuration with a primary tab horizontally extending from each end thereof, said third horizontally disposed fold line wholly within said first panel and forming a secondary tab thereon, said second panel having a peripheral portion defined by a side edge and its horizontally opposite end edge and forming a secondary tab, said secondary tabs being in generally superposed contiguous relationship with each other, and a centrally disposed generally vertical fold line dividing the wrapper into main sectors which main sectors are in opposed relationship to each other with said primary tabs being in generally superposed contiguous relationship with each other and in finger graspable relationship with said opposed main sectors.

4. A quick-opening wrapper for packaging surgical gloves and the like comprising a sheet of foldable material having opposed peripheral side edges and opposed peripheral end edges adjacent said side edges, said sheet having first and second horizontally disposed fold lines diagonal to and extending between a side edge and its horizontally opposed end edge, said first and second diagonal fold lines dividing said sheet into a first, central and second panels, said central panel having a major portion of generally rectangular configuration with a tab horizontally extending from each end thereof, said second panel in contiguous overlying relationship with portions of said central and said first panels, and a centrally disposed generally vertical fold line dividing the wrapper into main sectors which main sectors are in opposed relationship to each other with said tabs being in at least partial opposed contiguity with each other and extending beyond the defining walls of said main sectors in a finger graspable relationship with said opposed main sectors.

5. A quick-opening wrapper for packaging surgical gloves and the like comprising a rectangular sheet of foldable material having opposed side edges and opposed end edges adjoining said side edges, said sheet having first, second and third horizontally disposed fold lines diagonal to and extending between a side edge and its horizontally opposed end edge, said first and second diagonal lines dividing said sheet into first, central and second panels, said central panel having a major portion of generally rectangular configuration with a primary tab horizontally extending from each end thereof, said third horizontally

disposed fold line wholly within said first panel and forming a secondary tab thereon, said second panel having a peripheral portion defined by a side edge and its horizontally opposite end edge and forming a secondary tab, said secondary tabs being in generally superposed contiguous relationship with each other, and a centrally disposed generally vertical fold line dividing the wrapper into main sectors overlying in opposed relationship to each other with said primary tabs being in generally superposed contiguous relationship with each other and extending beyond the defining walls of said main sectors in a finger graspable relationship with said opposed main sectors.

6. A quick-opening wrapper for packaging surgical gloves and the like comprising a sheet of foldable material having opposed peripheral side edges and opposed peripheral end edges adjacent said side edges, said sheet having first and second horizontally disposed fold lines diagonal to and extending between a side edge and its horizontally opposed end edge, said first and second diagonal fold lines dividing said sheet into a first, central and second panels, said central panel having a major portion of generally rectangular configuration with a tab horizontally extending from each end thereof, said second panel in contiguous overlying relationship with portions of said central and said first panels, a plurality of vertically disposed fold lines including a central, end and intermediate fold lines, said vertical end fold lines defining the extent of said tabs, said central and said intermediate vertical fold lines dividing the wrapper into a plurality of generally rectangular secondary panels composed of inner panels and an outer panel adjoining each of said inner panels, each outer panel overlying its adjoining inner panel and said outer panels in superposed relationship to each other with said tabs in generally superposed contiguous relationship between said outer panels.

7. A quick-opening wrapper for packaging surgical gloves and the like comprising a sheet of foldable material having opposed peripheral side edges and opposed peripheral end edges adjacent said side edges, said sheet having first and second horizontally disposed fold lines diagonal to and extending between a side edge and its horizontally opposed end edge, said first and second diagonal fold lines dividing said sheet into a first, central and second panels, said central panel having a major portion of generally rectangular configuration with a tab horizontally extending from each end thereof, said second panel in contiguous overlying relationship with portions of said central and said first panels, a plurality of vertically disposed fold lines including a central, end and intermediate fold lines, said vertical end fold lines defining the extent of said tabs, said central and said intermediate vertical fold lines

dividing the wrapper into a plurality of generally rectangular secondary panels composed of inner panels and an outer panel adjoining each of said inner panels, each outer panel overlying its adjoining inner panel and said outer panels in superposed relationship to each other with said tabs in generally superposed contiguous relationship between and extending beyond said outer panels in a finger graspable relationship thereto.

8. A quick-opening wrapper for packaging surgical gloves and the like comprising a rectangular sheet of foldable material having opposed side edges and opposed end edges adjoining said side edges, said sheet having first, second and third horizontally disposed fold lines diagonal to and extending between a side edge and its horizontally opposed end edge, said first and second diagonal lines dividing said sheet into first, central and second panels, said central panel having a major portion of generally rectangular configuration with a primary tab horizontally extending from each end thereof, said third horizontally disposed fold line wholly within said first panel and forming a secondary tab thereon, said second panel having a peripheral portion defined by a side edge and its horizontally opposite end edge and forming a secondary tab, said secondary tabs being in generally superposed contiguous relationship with each other, a plurality of vertically disposed fold lines including a central, end and intermediate fold lines, said vertical end fold lines defining the extent of said primary tabs, said central and said intermediate vertical fold lines dividing the wrapper into a plurality of generally rectangular secondary panels composed of inner panels and an outer panel adjoining each of said inner panels, each outer panel overlying its adjoining inner panel and said outer panels in superposed relationship to each other with said primary tabs in generally superposed contiguous relationship between said outer panels.

References Cited by the Examiner

UNITED STATES PATENTS

923,182	6/1909	Joachim	229—87
1,288,548	12/1918	Finkenhagen	229—92.1
2,810,417	10/1957	Yerk.	
3,024,900	3/1962	Stanley.	
3,107,786	10/1963	Adelman	206—63.2

FOREIGN PATENTS

864,160	1/1941	France.
---------	--------	---------

JOSEPH R. LECLAIR, *Primary Examiner.*
FRANKLIN T. GARRETT, *Examiner.*