

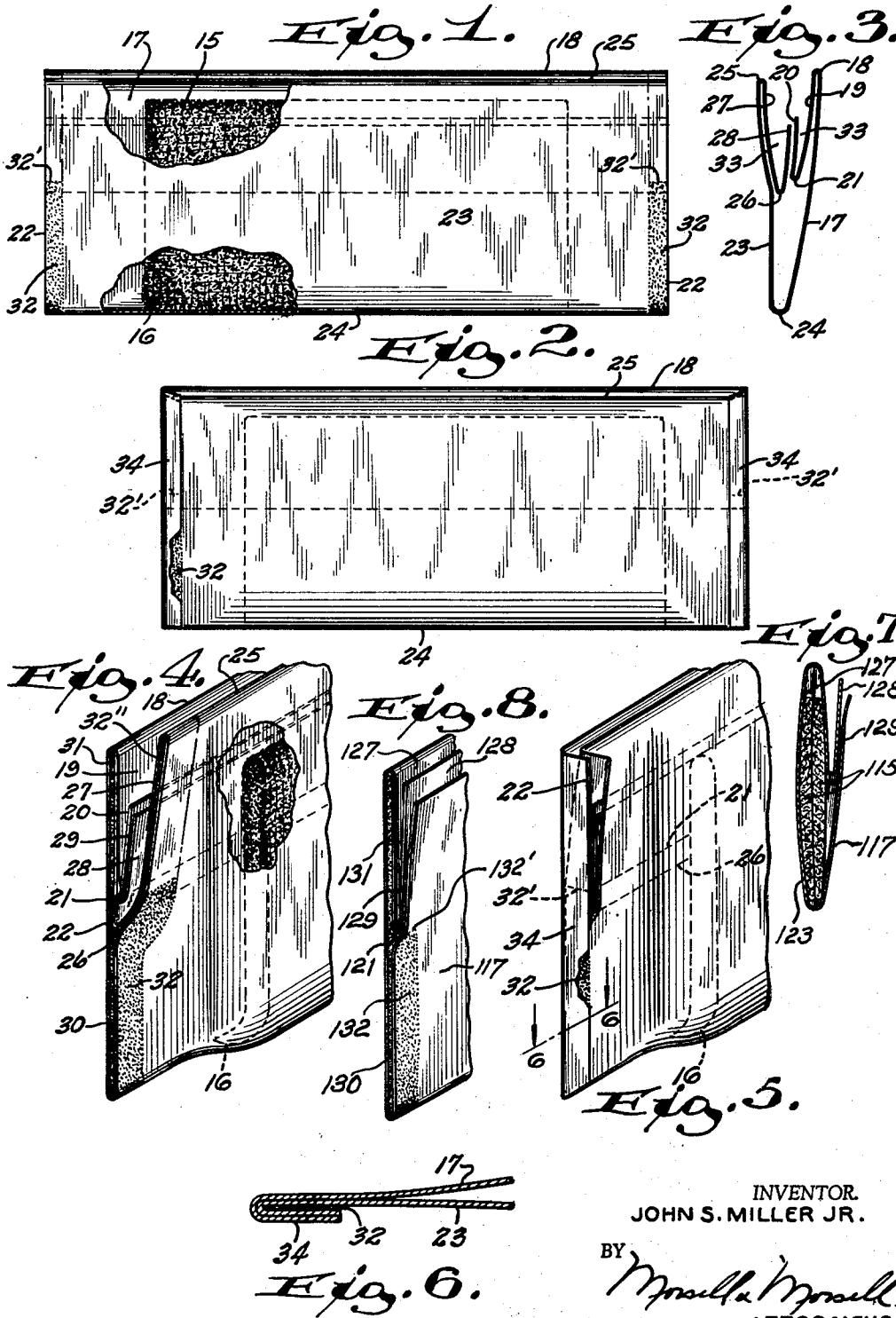
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PACKAGES FOR FLAT ARTICLES SUCH AS SURGICAL SUPPLIES

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PACKAGES FOR FLAT ARTICLES SUCH AS SURGICAL SUPPLIES

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This invention relates to improvements in packages for flat articles such as surgical supplies.

It is important that packages for sterile articles such as gauze pads, dressings, sponges and other surgical supplies be of such a nature that they can be easily and quickly opened without contaminating the article therein. In addition to the above, packages of this type must be neat and attractive in appearance and must be capable of being formed rapidly on production machinery.

The present invention is an improvement upon the package disclosed in the patent of Robert H. Pratt, No. 2,997,166, issued August 22, 1961. In the construction of the prior patent, the side edges of the package are sealed by a drug fold and the drug fold is glued down throughout its length. This interferes to some extent with the ease of opening the package. Inasmuch as speed is all important when an operation is being performed, improvements in ease of opening are important for certain uses. In an attempt to simplify opening, some packages of the general type of the prior patent have had side edges connected merely by an adhesive without any fold. This type of construction is relatively simple to open but where there is no fold, there is always the danger of the adhesively secured side edges opening prematurely to allow contamination of the article therein before it is used.

It is a general object of the present invention to provide an improved package wherein the means for closing the side edges of the package involves a novel combination of adhesive and hem-like folds which is so worked out as to prevent premature opening while making opening of the package quick and easy at the proper time.

A further object of the invention is to provide as one form of the invention a construction including flaps at the upper edge which are folded inwardly on a first fold line and then outwardly again on a second fold line, said second fold lines for said flaps being staggered to prevent the coinciding of the relatively weak fold lines.

It is a general object of the present invention to provide an improved package which can be inexpensively produced and which is capable of being easily opened without contaminating the contents.

A further object of the invention is to provide a package which can be expeditiously formed from a single sheet of material and which may be easily opened in a novel manner from an edge, the construction of the package being such that there are protecting flaps which project inwardly of the package from said edge to overlap the contents and protect the same from contamination, both during and after the opening of the package.

A further specific object of the invention is to provide an improved package as above described which may, if desired, contain two items or two portions of one folded item, the package being so constructed that there is a protecting flap for each item or portion.

With the above and other objects in view, the invention consists of the improved package for flat articles such as surgical supplies, and all of its parts and combinations as set forth in the claims, and all equivalents thereof.

In the accompanying drawing in which the same reference numerals designate the same parts in all of the views:

FIG. 1 is a plan view of the improved package before the hem-like portions at the side edges have been folded in, parts of the package being broken away;

FIG. 2 is a similar view after the hem-like portions have been folded over and secured, part being broken away;

FIG. 3 is a transverse sectional view through a blank which has been folded in the general form of the final package, the contents of the package being omitted and the parts being unglued for clarity;

FIG. 4 is a fragmentary perspective view looking toward one end of the partly completed package of FIG. 1, part being broken away;

FIG. 5 is a similar perspective view of the same end showing the completed package, part being broken away;

FIG. 6 is a sectional view taken on the line 6-6 of FIG. 5;

FIG. 7 is a transverse sectional view through a modified type of package; and

FIG. 8 is a fragmentary perspective view looking toward the left-hand end of a partly completed package of the modification of FIG. 7 showing the features of the present invention incorporated therein.

Referring more particularly to the drawing, the package is formed of a single sheet of paper. This may be thin, non-transparent packaging paper such as white sulphite, or it may be glassine, polyethylene, or any other material suitable for the purpose. While the package may be suitable for various flat articles, it is particularly designed for gauze pads, surgical dressings, surgical sponges and other surgical supplies of this general type. Either one or two items may be enclosed in a single package as desired. In the case of a single item 15, it will have a bottom fold 16 with front and rear superimposed portions.

The package comprises a rear panel 17 of paper having a top edge 18 constituting a first flap fold line for a flap 19 which is folded downwardly or inwardly therefrom, there being an outwardly folded portion 20 folded on a second flap fold line 21. The rear panel also has side edges 22. A front panel 23 is foldable from the bottom edge on a fold line 24. The upper edge of the front panel is folded downwardly or inwardly as at 27 on a first fold line 25, and then outwardly again on a second fold line 26 to provide a flap 28 to cooperate with the flap 20. In the preferred form of the invention illustrated the second fold lines 21 and 26 for the flaps are staggered or offset as is clear from FIGS. 3 and 4 so that the relatively weak points formed by the fold lines do not coincide.

The surgical sponge 15 has a portion loosely positioned on the rear panel with its upper edge between the rear panel and the flap 19. The sponge also has a front portion with an upper edge positioned between the front panel and the flap portion 27, the fold 16 between the front and rear portions of the article being at the bottom of the package. Where two articles are packaged, each article terminates near the bottom fold line 24 of the package instead of being connected together as illustrated.

In closing the package, which is usually done on automatic machinery, the outwardly turned flap portions 20 and 28 are secured together by an adhesive 29. The side edges of the front and rear panels have their lower portions secured together by an adhesive 30, side edges of the intumed flap 19 are secured to the side edges of the rear panel by an adhesive 31 and the side edges of the intumed flap portions 27 are secured to the side edges of the front panel by an adhesive 32. After this has been accomplished, the construction is as shown in FIGS. 1 and 4. Adhesive is also applied to the lower portions of the outside of the front panel adjacent its side edges as at 32, FIGS. 1 and 4. This adhesive terminates substantially opposite the fold line 21 as at 32', being the uppermost of the staggered fold lines for the flaps.

Next the side edges of FIG. 1 are folded over in hem-like fashion, as shown in FIGS. 2 and 5, the hem-like

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folds being held in folded condition by the adhesive 32 at the lower portions. This adhesive extends high enough to maintain the upper portions in folded condition as shown in FIG. 2, but said upper portions are readily separable as indicated in FIG. 5 to facilitate opening the package.

In opening the package, the thumbs are inserted in the spaces 33, FIG. 3, between the upturned portions of the flaps and the flap portions 19 and 27. The two halves of the package are then pulled apart by breaking the adhesive at 29 between the upturned flap portions. At the start of such pulling the upper portions of the hem-like folds 34 at the sides open up in the manner shown in FIG. 5 so that there is no resistance at the sides. Continued pulling apart will eventually force open the side closures all the way down, and the two sides of the package can then be pulled into substantial alinement as is fully disclosed in prior Pratt patent, No. 2,997,166. When in this condition, the flap portions 19 and 27 protect the sterile article portions both during and after opening of the package, and provide for retention of the article portions in the fingers between said flaps and panels while allowing easy withdrawal for use independently of the panels.

In the modified type of package of FIGS. 7 and 8, there is a back panel 123 having a downturned flap 127 which is up-turned again at 128. There is also a front panel 117 folded upwardly from the lower edge of the back panel. In the form of the invention of FIGS. 7 and 8 there are no flaps in connection with the upper edge of the front panel 117. Instead this panel is adhesively secured as at 129 to the up-turned flap 128. There may be two gauze sheets 115 as shown in FIG. 7, both of which are accommodated between the flap 127 and the back panel 123. Referring now to FIG. 8, the lower portion of each side edge of the front panel 117 is adhesively secured to the rear panel by an adhesive 130 as shown in FIG. 8. In addition, the side edges of the in-turned flap 127 are secured to the side edges of the back panel by adhesive as at 131. Just as in the principal form of the invention, adhesive is applied to the lower portion of the outside of the front panel 117 as at 132 in FIG. 8. This adhesive terminates substantially opposite the fold line 121 as at 132'. Both side edges of the package FIG. 8 are then folded over in hem-like fashion, the hem-like folds being held in folded condition by the adhesive 132 at the lower portions just as is done in the principal form of the invention in FIG. 5. This adhesive extends up to the point 132' which is high enough to maintain the upper portions in folded condition. However, said upper portions are readily separable, just as in FIG. 5, to facilitate opening of the package.

It is apparent that with the novel side closures shown in FIG. 2, there is no danger of the sides of the package opening prematurely. It is also apparent that due to the combination of the hem-like folds with gluing on predetermined portions only, that the package may nevertheless be readily opened without undue interference from the side closures. By having the second fold lines 21 and 26 for the flaps staggered one above the other, undesirable coinciding of relatively weak fold lines is avoided in the form of the invention of FIG. 4.

It is to be understood that the present invention is not to be limited to the exact details of construction for obvious modifications will occur to persons skilled in the art.

What I claim is:

1. A package comprising a rear panel of paper having top, bottom, and side edges and having flap means folded on a first fold line from said top edge inwardly into superimposed position on said panel and then outwardly again on a second fold line; a relatively flat unwrapped article portion loosely positioned all in one plane on said panel and overlapped by said flap means and extending up-

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wardly a substantial distance beyond said second fold line; a front panel connected to the bottom edge of said rear panel and having a flap means folded on a first fold line inwardly and then outwardly again on a second fold line; the second fold line for one of said flap means being staggered above the second fold line for the other of said flap means; a relatively flat unwrapped article portion loosely positioned on said front panel having a portion overlapped by said last mentioned flap means and extending upwardly a substantial distance beyond both of said staggered second fold lines, said front panel, article portion, and flap means being in superimposed position on said rear panel and on its article portion and flap means; an adhesive on said outwardly folded portions of the flap means securing said portions together; and adhesive means beyond the side edges of said articles connecting the side edges of the front and rear panels together and the side edges of said flap means to the adjacent panels, said flap means protecting the articles both during and after opening of the package and the articles extending a sufficient distance toward said first fold lines for said flap means to provide for retention of both articles in the fingers between the flap means and beyond both of said staggered second fold lines and panels while allowing easy withdrawal of either article for use independently of the other articles and independently of the panels.

2. A package comprising a rear panel of paper having top, bottom, and side edges and having flap means folded on a first fold line from said top edge inwardly into superimposed position on said panel and then outwardly again on a second fold line; a relatively flat unwrapped article portion loosely positioned all in one plane on said panel overlapped by said flap means and extending upwardly a substantial distance beyond said second fold line; a front panel connected to the bottom edge of said rear panel and having a flap means folded on a first fold line inwardly and then outwardly again on a second fold line; the second fold line for one of said flap means being staggered above the second fold line for the other of said flap means; a relatively flat unwrapped article portion loosely positioned on said front panel having a portion overlapped by said last mentioned flap means and extending upwardly a substantial distance beyond both of said staggered second fold lines, said front panel, article portion, and flap means being in superimposed position on said rear panel and on its article portion and flap means; an adhesive on said outwardly folded portions of the flap means securing said portions together; and adhesive means beyond the side edges of said articles connecting the side edges of the front and rear panels together and the side edges of said flap means to the adjacent panels, said flap means protecting the articles both during and after opening of the package and the articles extending a sufficient distance toward said first fold lines for said flap means and beyond both of said staggered second fold lines to provide for retention of both articles in the fingers between the flap means and panels while allowing easy withdrawal of either article for use independently of the other articles and independently of the panels, said side edges being folded inwardly in hem-like fashion on one of said panels, and adhesive connecting lower portions of the hem-like folds in folded condition while leaving upper portions adjacent said outwardly turned flap means loose.

3. A package comprising a rear panel of paper having top, bottom, and side edges and having flap means folded on a first fold line from said top edge inwardly into superimposed position on said panel and then outwardly again on a second fold line; a relatively flat unwrapped article portion loosely positioned all in one plane on said panel and overlapped by said flap means; a front panel connected to the bottom edge of said rear panel and having a flap means folded on a first fold line inwardly and then outwardly again on a second fold line, a relatively flat un-

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wrapped article portion loosely positioned on said front panel having a portion overlapped by said last mentioned flap means, said front panel, article portion, and flap means being in superimposed position on said rear panel and on its article portion and flap means; an adhesive on said outwardly folded portions of the flap means securing said portions together; and adhesive means beyond the side edges of said articles between the juxtaposed portions of the front and rear panels and between said panels and the first folded portions of said flap means connecting the side edges of the front and rear panels together and the side edges of said flap means to the adjacent panels, said flap means protecting the articles both during and after opening of the package and the articles extending a sufficient distance toward said first fold lines for said flap means to provide for retention of both articles in the fingers between the flap means and panels while allowing easy withdrawal of either article for use independently of the other articles and independently of the panels, said side edges being folded inwardly in hem-like fashion on one of said panels, and adhesive maintaining the lower portions of the hem-like folds in folded position while leaving upper portions loose, said adhesive extending from the bottom of the package approximately half way up the height of the package only.

4. A package comprising a rear panel of paper having top, bottom, and side edges and having flap means folded on a first fold line from said top edge inwardly into superimposed position on said panel and then outwardly again on a second fold line; a relatively flat unwrapped article portion loosely positioned all in one plane on said panel and overlapped by said flap means; a front panel connected to the bottom edge of said rear panel and having a flap means folded on a first fold line inwardly and then outwardly again on a second fold line, a relatively flat unwrapped article portion loosely positioned on said front panel having a portion overlapped by said last mentioned flap means, said front panel, article portion, and flap means being in superimposed position on said rear panel and on its article portion and flap means; an adhesive on said outwardly folded portions of the flap means securing said portions together; and adhesive means beyond the side edges of said articles between the juxtaposed portions of the front and rear panels and between said panels and the first folded portions of said flap means connecting the side edges of the front and rear panels together and the side edges of said flap means to the adjacent panels, said flap means protecting the articles both during and after opening of the package and the articles extending a sufficient distance toward said first fold lines for said flap means to provide for retention of both articles in the fingers between the flap means and panels while allowing easy withdrawal of either article for use independently of the other articles and independently of the panels, said side edges being folded inwardly in hem-like fashion on one of said panels, and adhesive maintaining the lower portions of the hem-like folds in folded position while leaving upper portions loose, said adhesive extending from the bottom of the package approximately half way up the height of the package only to the vicinity of the second fold lines for the flaps.

5. A package comprising a rear panel of paper having top, bottom, and side edges and having flap means folded on a first fold line from said top edge inwardly into superimposed position on said panel and then outwardly again on a second fold line; a relatively flat unwrapped article portion loosely positioned all in one plane on said panel and overlapped by said flap means; a front panel connected to the bottom edge of said rear panel and having a flap means folded on a first fold line inwardly and then outwardly again on a second fold line, said second fold lines being staggered one above the other so that one is higher; a relatively flat unwrapped article portion loosely positioned on said front panel having a portion overlapped by said last mentioned flap means, said front

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panel, article portion, and flap means being in superimposed position on said rear panel and on its article portion and flap means; an adhesive on said outwardly folded portions of the flap means securing said portions together; and adhesive means beyond the side edges of said articles between the juxtaposed portions of the front and rear panels and between said panels and the first folded portions of said flap means connecting the side edges of the front and rear panels together and the side edges of said flap means to the adjacent panels, said flap means protecting the articles both during and after opening of the package and the articles extending a sufficient distance toward said first fold lines for said flap means to provide for retention of both articles in the fingers between the flap means and panels while allowing easy withdrawal of either article for use independently of the other articles and independently of the panels, said side edges being folded inwardly in hem-like fashion on one of said panels, and adhesive maintaining the lower portions of the hem-like folds in folded position while leaving upper portions loose, said adhesive extending from the bottom of the package part way up the height of the package only and terminating opposite said higher of the second fold lines for the flaps.

6. A package comprising a rear panel of paper having top, bottom, and side edges and having flap means folded on a first fold line from said top edge inwardly into superimposed position on said panel; a relatively flat unwrapped article portion loosely positioned all in one plane on said panel and overlapped by said flap means; a front panel connected to the bottom edge of said rear panel and having a flap means folded inwardly; a relatively flat unwrapped article portion loosely positioned on said front panel having a portion overlapped by said last mentioned flap means, said front panel, article portion, and flap means being in superimposed position on said rear panel and on its article portion and flap means; an adhesive on said flap means securing them together; and adhesive means beyond the side edges of said articles between the juxtaposed portions of the front and rear panels and between said panels and the first folded portions of said flap means connecting the side edges of said flap means to the adjacent panels, said flap means protecting the articles both during and after opening of the package, and the articles extending a sufficient distance toward said fold lines for said flap means to provide for retention of both articles in the fingers between the flap means and panels while allowing easy withdrawal of either article for use independently of the other articles and independently of the panels, said side edges being folded inwardly in hem-like fashion on one of said panels, and adhesive extending from said bottom edge and terminating approximately at lower portions of said flap means maintaining the lower portions only of the hem-like folds in folded condition while leaving upper portions adjacent said flap means loose.

7. A package comprising a rear panel of paper having top, bottom, and side edges and having flap means folded on a first flap fold line from said top edge inwardly into superimposed position on said panel and then outwardly on a second flap fold line; a relatively flat unwrapped article loosely positioned on said panel and overlapped by said flap means; a front panel connected to the bottom edge of said rear panel; said front panel being in superimposed position over said rear panel and its flap means and over the article; means including adhesive securing said front panel to said outwardly folded flap means of the rear panel; and adhesive means beyond the side edges of said article between the juxtaposed front and rear panel portions and between said rear panel and the first folded portion of its flap means connecting the side edges of said flap means to the adjacent panel, said side edges being folded inwardly in hem-like fashion on one of said panels; and adhesive maintaining the lower portions only of the hem-like folds in folded condition and

terminating in the vicinity of the second fold line for said flap means to leave upper portions adjacent the ends of said outwardly folded flap portion loose.

References Cited in the file of this patent

UNITED STATES PATENTS

2,329,262 Ganz ----- Sept. 14, 1943

5

2,410,438
2,946,435
2,968,396
2,997,166
2,998,880
3,062,371

Fields ----- Nov. 5, 1946
Schladermundt ----- July 26, 1960
Pratt ----- Jan. 17, 1961
Pratt ----- Aug. 22, 1961
Ladd ----- Sept. 5, 1961
Patience ----- Nov. 6, 1962