Nov. 1, 1966 G. C. SPARKS 3,282,413

CATCH-COVER PACKAGE AND METHOD OF MANUFACTURE

Filed Sept. 22, 1965 2 Sheets-Sheet 1

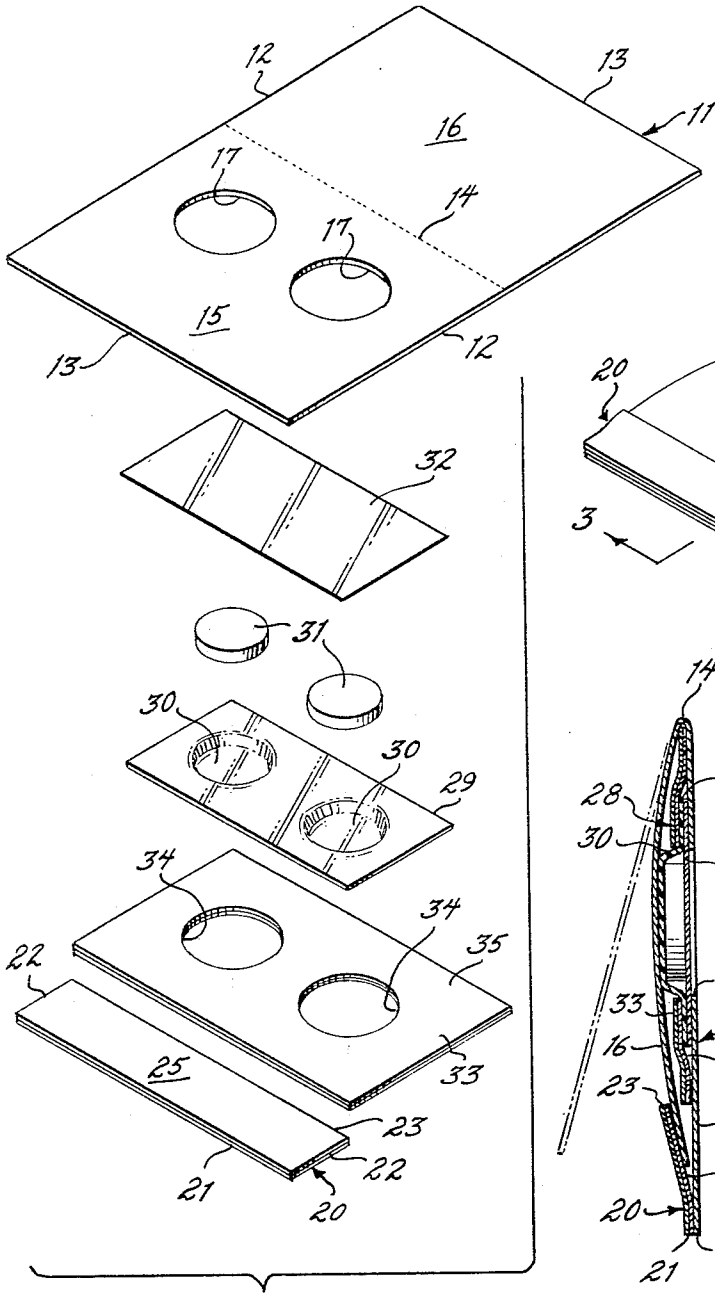


Fig. 1.

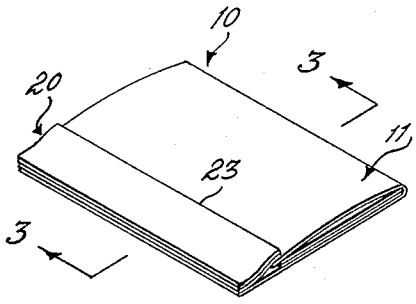


Fig. 2.

Fig. 3.

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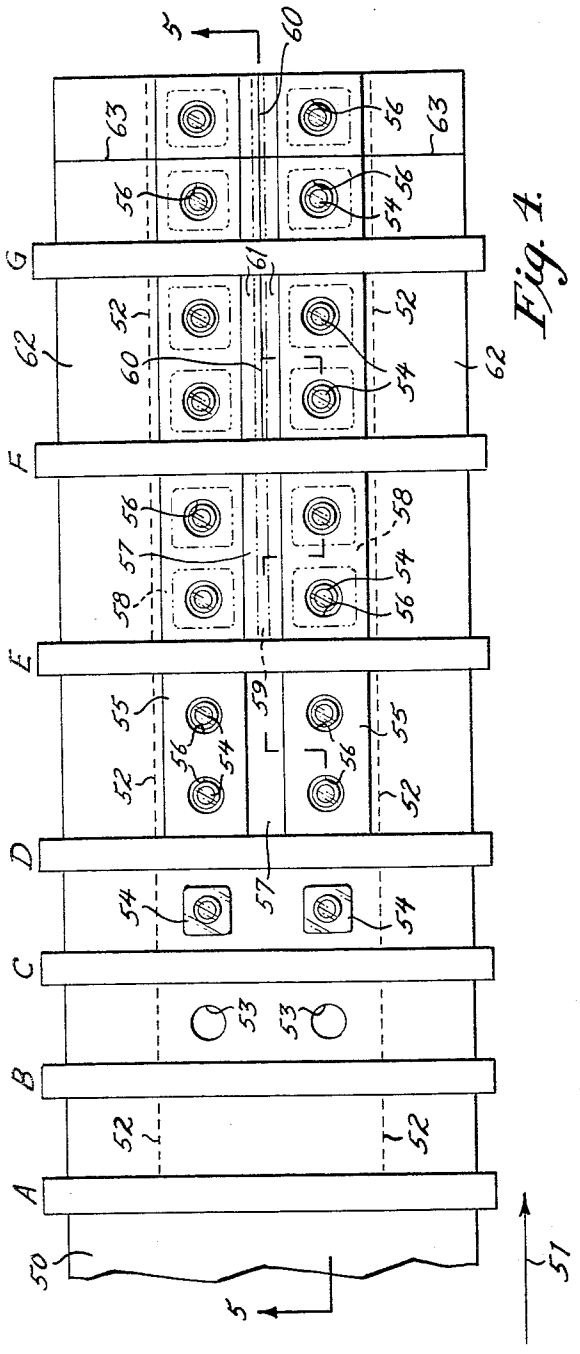


Fig. 4.

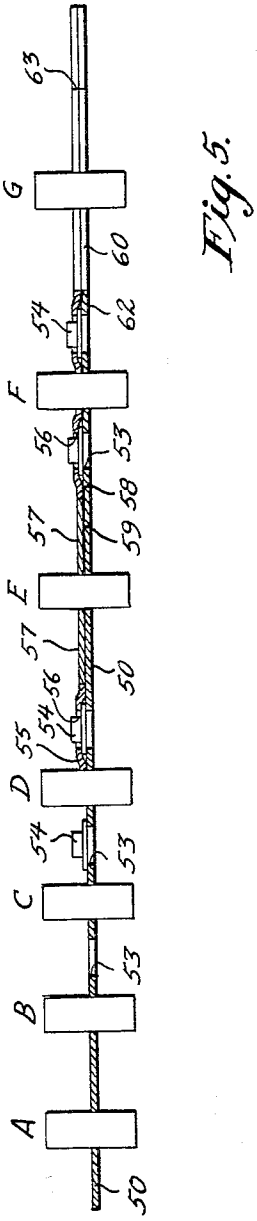


Fig. 5.

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CATCH-COVER PACKAGE AND METHOD OF MANUFACTURE

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8 Claims. (Cl. 206—56)

This invention constitutes an improvement over that disclosed in my copending patent application, Serial No. 349,287, filed March 4, 1964, now abandoned, and this application is a continuation-in-part thereof.

This invention relates generally to packaging, and is especially concerned with unique improvements in catch-cover packages and methods of manufacture.

As is well known to those versed in the art, catch-cover packages have heretofore required the formation of a fold and securement thereof, as by a staple, or the like, to provide a catch for removable retention of the cover in closed condition.

It is an important object of the present invention to provide a highly improved catch-cover package and method of manufacturing the same wherein the secured fold and incident manufacturing procedures are eliminated, to provide a highly effective and attractive catch-cover package in a simpler, more efficient and economical manner.

It is a further object of the present invention to provide a catch-cover package and method of manufacture of the type described in the preceding paragraph which may be automatically and economically mass-produced with relatively simple and inexpensive equipment.

It is still a further object of the present invention to provide a catch-cover package of the type described which is neat and esthetically appealing in appearance, eliminating the relatively bulky fold and exposed fastener of prior catch-cover packages, and which is uniquely well adapted for packaging of pharmaceuticals, as well as many other articles of contents.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings, which form a material part of this disclosure.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope will be indicated by the appended claims.

In the drawings:

FIGURE 1 is an exploded perspective view showing the various components of a catch-cover package constructed in accordance with the teachings of the present invention and illustrating the manner of assembly;

FIGURE 2 is a perspective view illustrating an assembled catch-cover package of the present invention;

FIGURE 3 is a sectional view taken generally along the line 3—3 of FIGURE 2, somewhat enlarged, and illustrating the catch cover in open condition in dot-and-dash outline;

FIGURE 4 is a diagrammatic plan view illustrating a method according to the present invention; and

FIGURE 5 is a sectional elevational view taken generally along the line 5—5 of FIGURE 4.

Referring now more particularly to the drawings, and specifically to FIGURES 2 and 3, a catch-cover package is there generally designated **10**. The package includes a main sheet **11** which may be fabricated of stiff flexible paperboard, or other suitable material, and is of generally rectangular-outline configuration, as best seen in FIGURE 1.

The sheet **11** includes a pair of generally parallel side edges **12**, and opposite end edges **13** extending in parallelism with each other between opposite ends of the side edges **12**.

Extending in parallelism with and in spaced relation between the opposite edges **13** is a fold or crease **14**, which may subdivide the main sheet **11** into a pair of generally rectangular panels **15** and **16**. The panel **15** may be considered as the back panel of the completed package, and the panel **16** as the front panel thereof, the latter panel being somewhat smaller than the front panel. Further, the back panel may be formed with one or more thru openings **17**, defining discharge openings or outlets in the assembled package, as will appear more fully hereinafter.

In addition to the relatively large main sheet **11**, there is provided a relatively small auxiliary sheet **20**, which may be of elongate configuration as seen in FIGURES 1 and 2. The auxiliary sheet **20** may be of a length substantially equal to the width of main sheet **11**, as along an edge **13**, and may be fabricated of suitably stiff, resilient paperboard, or other desired material.

In assembly, the auxiliary sheet **20** is arranged in facing relation with the back panel **15** of main sheet **11** extending along the edge **13** thereof. In particular, one longitudinal edge **21** of auxiliary sheet **20** is arranged outwardly, being coextensive and substantially coincident with the adjacent edge **13** of main sheet **11**. The end edges **22** of auxiliary sheet **20** are thus coincident with respective side edges **12** of panel **15**, and the inner longitudinal edge **23** of the auxiliary sheet is spaced inward from the adjacent edge **13** by the width of the auxiliary sheet.

One of the facing surfaces of either main sheet **11** or auxiliary sheet **20** is advantageously coated with a suitable heat-sealable material or thermoplastic film. Thus, as seen in FIGURE 3, the facing surface of auxiliary sheet **20** may be provided with a thermoplastic coating or film **25**, which may be substantially coextensive with the auxiliary sheet.

The auxiliary sheet **20** is adhesively secured in its facing relation with the main sheet **11** by the thermoplastic material **25**. In particular, the thermoplastic material **25** is activated, as by heat, longitudinally along the outer edge **21** to adhesively secure the marginal portion thereof in facing engagement with the adjacent portion of back panel **15**. The remainder of auxiliary sheet **20**, namely the marginal portion along edge **23**, remains free of the back panel **15**. It will now be appreciated that the front panel **16** may be swung forwardly about the fold **14** and flexed to engage its edge **13** between the free marginal edge **23** of auxiliary sheet **20** and the back panel, where it will be self-retaining in the closed condition.

Carried by the main sheet **11** may be container means, such as generally designated **28** in FIGURE 3, for carrying articles of contents. The container means may include a generally flat sandwich sheet **29**, which may advantageously be fabricated of transparent plastic material and provided with one or more pocketlike formations **30** for receiving articles of contents **31**. Extending across and in closing relation with respect to the pockets **30** may be a closure sheet **32**, preferably of rupturable material, such as aluminum foil, or the like. The closure sheet **32** may be suitably secured in facing engagement with the sandwich sheet **29** to hermetically seal the contents **31** in the pockets **30**.

In assembly with the sheets **11** and **20**, the sandwich sheet **29** is located on the forward side of the back panel **15**, in facing relation therewith, the pockets **30** being advantageously in respective alignment with discharge openings **17**. The closure sheet **32** is located between the sandwich sheet **29** and back panel **15**, and therefore extends across both the pockets **30** and discharge outlets **17**.

Securing the sandwich sheet **29**, contents **31** and closure sheet **32** in the above-described position on the panel **15** is a cover sheet **33** overlying the front surface of sand-

wich sheet 29 and having thru openings 34 respectively receiving forwardly protruding pockets or blisters 30. The cover sheet 33 may be dimensioned to extend beyond the sandwich sheet 29 and closure sheet 32 entirely thereabout, so as to have its peripheral margin in direct facing relation with the back panel 15. Further, the rear surface of cover sheet 33 may be coated with thermoplastic 35, or other suitable adhesive material for securement of the cover sheet in firm facing engagement with the back panel 15. Of course, the back panel may optionally be provided with a heat-sealable coating on its forward surface for securement to the cover sheet 33, and to the closure sheet 32, if desired.

In the method of manufacture, the several component parts as described hereinbefore may be stacked or superposed as illustrated in FIGURE 1 and secured together, as under pressure and heat. The panel 16 may then be swung about its fold 14 and closed, as described hereinbefore, being removable from its closed condition to a partially open condition shown in dot-and-dash outline in FIGURE 3. Of course, further upward swinging of the panel 16 serves to fully open the package. The contents 31 may be readily removed by rupture of the closure sheet 32 and passage of the contents through openings 17.

The method of the present invention is shown in greater detail in FIGURES 4 and 5. An elongate web 50, of flexible sheet material, such as thermoplastic-coated card stock, is fed in the direction of arrow 51, passing initially through station A, where it is formed with a pair of laterally spaced, longitudinally extending lines of weakening 52, as by scoring or perforation. The web 50 passes thence through station B, where it is provided with at least a pair of thru openings 53, each located adjacent to and inward of a respective score line 52. The web 50 passes thence through station C, wherein an article of contents 54 is located on the web over each opening or hole 53. The articles 54 may each be a prepackaged pill, capsule or the like, sealed in sandwiched relation between a transparent cupped sheet, and a rupturable closure sheet, in the manner of the container means previously described.

From the station C, the scored and punched web 50, carrying the container means 54, passes to the station D, wherein retainer webs 55 are arranged overlying the container means 54, and advantageously having thru openings 56 exposing therethrough the container means. The retainer webs 55 extend longitudinally along the carrier web 50, each adjacent to and inward of a respective score line 52 and in side-by-side spaced relation with respect to each other. In addition, also at the station D, or another station, if desired, an auxiliary sheet or web 57 may be arranged longitudinally on a medial region of the web 50, interposed between the retainer webs 55. If desired, the retainer webs 55 and auxiliary web 57 may be formed from a single web, being longitudinally severed and arranged in edge-to-edge relation with each other.

From station D, the web 50 goes to station E, at which the retainer webs 55 and auxiliary web 57 are adhesively secured to the carrier web 50, as at 58 and 59, respectively. Such securement may be effected by heat and pressure to activate the thermoplastic coating of web 50 at desired regions thereof. More specifically, the retainer webs 55 may be secured at 58 to the carrier web 50 at locations surrounding the container means 54, while the auxiliary-web securement 59 extends along a longitudinal medial region of the auxiliary web.

In the above-described secured relationship, the web 50 and its appendages are conveyed to station F, at which severance is made along a line or cut 60 extending medially of the auxiliary-sheet securement 59. This severance or cut 60 passes simultaneously through both the auxiliary web or sheet 57 and nether carrier sheet 50, thereby leaving separate portions 61 of the auxiliary sheet or web 57 secured to separate portions 62 of the web 50. Further, the inner edges of the auxiliary-sheet portions 61 overlie and are free of the nether portions of sheet 62. In this longitudinally medially severed condition, the web portions 62 and appendages may pass through station G, where they are further severed, as along cuts or lines 63 extending transversely of or normal to the severance 60. It will now be appreciated that the resultant products define catch-cover packages similar to that described in FIGURES 1–3, requiring only that the cover sheet be folded along score 52 with its free edge insertable beneath the free edge of the associated auxiliary sheet 61.

From the foregoing, it is seen that the present invention provides a catch-cover package and method of manufacture which fully accomplish their intended objects and are well adapted to meet practical conditions of manufacture, distribution and use.

Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be made within the spirit of the invention and scope of the appended claims.

What is claimed is:

1. A catch-cover package comprising a relatively large generally rectangular main sheet having opposite edges, a relatively small elongate auxiliary sheet extending entirely along one of said opposite edges in facing engagement with said main sheet, adhesive means adhesively securing the outer longitudinal edge margin of said auxiliary sheet to said main sheet, the inner longitudinal edge of said auxiliary sheet being entirely free of said main sheet, and container means carried by said main sheet adjacent to and inward of said auxiliary sheet, said main sheet being folded entirely over said container means to swing the other opposite edge of said main sheet into engagement beneath the inner edge of said auxiliary sheet for removable retention thereby.

2. A catch-cover package according to claim 1, said opposite edges and the fold of said main sheet being generally parallel.

3. A catch-cover package according to claim 1, said securing means comprising thermoplastic coating on the facing surface of at least one of said sheets and activated along the outer longitudinal edge margin of said auxiliary sheet.

4. A catch-cover package according to claim 1, said container means comprising a sandwich sheet in facing relation with said main sheet and having a deformation for receiving an article of contents, and a cover sheet over said sandwich sheet and secured to said main sheet to retain said sandwich sheet in position, said cover sheet being cut out to receive said deformation.

5. A catch-cover package according to claim 4, said main sheet being provided with a discharge opening in alignment with said deformation, and a rupturable closure sheet extending across said deformation and discharge opening.

6. In the method of manufacturing a catch-cover package, the steps which comprise: providing a large sheet, providing a small sheet, arranging said small sheet in facing relation with and extending across a medial region of said large sheet, securing said small sheet along a longitudinally extending medial region thereof to said large sheet with the side edge portions of said small sheet free of said large sheet, severing said large and small sheets medially along the adhesively secured portion thereof to divide said sheets into a pair of relatively large cover sheets each having secured along one edge thereof a relatively small catch sheet, and folding each of said cover sheets to insert the opposite edge thereof beneath the respective catch sheet.

7. The method of manufacturing a catch-cover package according to claim 6, further characterized in securing articles of contents to each of said cover sheets before said severance.

8. The method of manufacturing a catch-cover package according to claim 6, further characterized in continuously

conveying said sheets along the direction of said severance during said arranging, securing and severing.

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