The invention relates in general to packages of the type comprising an approximately flat rectangular bag, envelope or like container formed of superposed sheets of material, and a protective cover formed of flexible material relatively stiffer than the material of which the container is formed, the cover being folded around the container, there being small articles such as medicinal tablets, capsules or the like sealed between said sheets of material of the container in individual compartments.

When placing a new commodity, such as a medicinal tablet, capsule or the like, on the market, samples of the product are mailed, for example, to members of the medical profession. It is, of course, necessary that the commodities shall be adequately protected from damage in shipment. Also, it is desirable that the commodities be neatly packaged for ready accessibility after having been received by the addressee, and during the period that the package is carried on one's person as the commodities are being used. It is highly desirable that these considerations be accomplished with a minimum of handling and packaging costs.

In accordance with our invention, a package of the type generally described above is provided with a cover constructed to furnish both a mailing or addressing portion and a neat package which may be carried on one's person and affords ready accessibility to the contents during usage, or after the package has been delivered and opened. Our improved cover structure permits simple opening and conversion of the mailed package to a neat "carry" package, protection of the contents both in shipment and during usage being provided. Moreover, handling for mailing and shipment is kept to a minimum, thereby furnishing the benefits of low cost. In the preferred form of the invention, additional removable protective means is provided to prevent damage of the commodities during shipment.

Another aspect of the invention resides in forming the cover with improved package closure means. Still another aspect of the invention resides in forming the cover with a separable or detachable portion which serves as an index card having information thereon concerning the packaged product.

Other objects, advantages and results of the invention will be brought out by the following description in conjunction with the accompanying drawings, in which:

Fig. 1 is a front elevational view of a combined package and mailing cover made in accordance with one embodiment of our invention;
Fig. 2 is a rear elevational view of the package shown in Fig. 1;
Fig. 3 is a rear elevational view of the package showing the first step in the opening of the package;
Fig. 4 is a view similar to Fig. 3 showing the next step in the opening of the package;
Fig. 5 is a rear elevational view showing the package closure means of the package in opened position, permitting the package to be unfolded for access to the commodities in the container;
Fig. 6 is a view similar to Fig. 5 showing the reverse or front side of the partially opened package of Fig. 5;
Fig. 7 is a plan view of the package, partly broken away, after having been unfolded to a condition just prior to folding back the closure flap portion to expose the underlying container of articles;
Fig. 8 is a view similar to Fig. 7 showing the closure flap portion of the cover folded back and exposing the packaged articles, a frame or guard for protecting the articles during shipment being shown;
Fig. 9 is a partial plan view showing the reverse side of the package illustrated in Fig. 8;
Fig. 10 is a vertical cross-sectional view, on an enlarged scale, taken approximately in the plane of line 10-10 of Fig. 8;
Fig. 11 is a view similar to Fig. 7 showing the manner in which the mailing and package closure portion of the cover is removed to convert the mailed package to a "carry" package permitting ready accessibility to the articles and restoration of the package to closed condition;
Fig. 12 is a plan view of the "carry" package after the closure flap portion has been removed from under the container-attaching flap, a guard sheet being swung outwardly away from over the container to expose the container of articles;
Fig. 13 is a vertical cross-sectional view, on an enlarged scale, taken approximately in the plane of line 13-13 of Fig. 2;
Fig. 14 is a vertical cross-sectional view, on an enlarged scale, taken approximately in the plane of line 14-14 of Fig. 11;
Fig. 15 is a front elevational view of another embodiment of a combined package and mailing cover made in accordance with our invention;
Fig. 16 is a rear elevational view of the package shown in Fig. 15;
Fig. 17 is a vertical cross-sectional view, on an enlarged scale, taken approximately in the plane of line 17-17 of Fig. 15;
Fig. 18 is a rear elevational view of the package showing the package closure means in opened position, thereby permitting the package to be unfolded for access to the commodities in the container, this view also showing the manner in which the closure means is detached from the package cover to provide an index card;
Fig. 19 is a plan view of the package in its fully opened or unfolded condition;
Fig. 20 is a view similar to Fig. 19 showing the manner in which the mailing and package closure portion is removed to convert the mailing package to a "carry" package;
Fig. 21 is a front elevational view of the closed "carry" package, the closure flap portion of the cover being removedly received under the container-attaching flap;
Fig. 22 is a rear elevational view of the "carry" package of Fig. 21;
Fig. 23 is a vertical cross-sectional view, on an enlarged scale, taken approximately in the plane of line 23-23 of Fig. 21;
Fig. 24 is a front elevational view of a combined package and mailing cover made in accordance with still another embodiment of our invention;
Fig. 25 is a rear elevational view of the package shown in Fig. 24;
Fig. 26 is a plan view of the package of Figs. 24 and 25 in its fully opened condition;
Fig. 27 is a vertical cross-sectional view, on an enlarged scale, taken approximately in the plane of line 27-27 of Fig. 25;
Fig. 28 is a view similar to Fig. 27 showing the manner in which the package closure means in manipulated
or folded to securely lock the package in closed condition; and

Fig. 29 is a view similar to Fig. 28 showing the resultant locked package.

Referring to the drawings, the invention generally comprises a combined package and mailing cover which includes an approximately flat commodity container A having flexible walls provided, in which a commodity is enclosed. The container is secured to, and enclosed in, a relatively stiff but flexible cover B. The cover comprises a main body panel b having a length and breadth slightly larger than the length and breadth of the container. The main body panel is juxtaposed to one wall of the container. The cover is further provided with a container-attaching flap f having an edge adjacent an edge of the main body panel b, the container-attaching flap being juxtaposed to the opposite wall of the container. The container A is secured to the cover B intermediate the adjacent edges of the main body panel and the container-attaching flap. The opposite edge of the main body panel is provided with a closure flap C adapted to be juxtaposed to the same wall of the container as the container-attaching flap. The closure flap is formed to engage, or to be removably received under, the container-attaching flap. The cover is further provided with a mailing and package closure portion D separably connected, as by means of a scored line, to the cover. The portion D includes an addressing panel e and package closure means e. The addressing panel has substantially the same dimensions as the main body panel b, and is adapted to be exposed on one side of the package when the package is closed. The package closure means e is adapted to be disposed on the opposite side of the closed package. The package closure means serves to maintain the cover closely surrounding the container, but provides for opening of the cover to open the package for access to the container.

In the preferred form of the invention, the flexible walls of the container A are sealed together in zones to form and bound the compartment or compartments in which the commodity or commodities are enclosed so that at least one wall of the container bulges from the plane of the container wall. To protect the articles against damage such as crushing during shipment, a guard member E of relatively stiff material is pressed between a wall of the container from which the compartment bulges and an adjacent portion of the cover. The guard sheet is provided with an opening in register with and enclosing the bulging wall of each compartment. The thickness of the guard sheet is greater than the distance that the compartment bulges from the plane of the corresponding container wall, and is approximately equal to the normal distance between the plane of the container wall and the adjacent portion of the cover. In this manner, the guard member is held against slipping out of the package when the package is closed, though the guard member is otherwise free from and unconnected with either the commodity container or the cover.

Specifically describing the embodiment of the invention shown in Figs. 1 to 14, and referring more particularly to Figs. 12, 13 and 14, the container A is formed of two layers 1 and 2 of suitable flexible material such as cellophane, Pliofilm, metallic foil paper or the like. This material may be thermoplastic itself or may have a thermoplastic or fusible coating so that the juxtaposed layers can be caused to adhere together by application of heat and pressure, or the layers could be sealed together with an adhesive. These layers may be of any suitable shape and size but are shown as rectangular sheets. As shown, the layers are heat sealed and crimped in zones 3 forming and bounding compartments 4 between the layers in which articles, such as medicinal tablets 5, are enclosed. The container thus comprises a sheet of integral sub-packages, each containing a tablet and being separable from the sheet along score lines 6, as shown in Fig. 12. The walls of each compartment tightly grip the articles between them and bulge or project beyond the general plane of the container within the sealed zones 3. The container has a marginal extension 7 projecting beyond the packaged articles. The marginal extension is utilized for attaching the container to the cover B.

The cover B preferably comprises a single strip or sheet of flexible material such as heavy paper or carton stock that is relatively stiffer than the layers of which the container A is formed. As shown in Figs. 8 and 10, the cover includes the main body panel b juxtaposed to one side of the container A. The main body panel has a length and breadth slightly larger than the length and breadth of the container, and may thus be accomplished by the application of heat and pressure where the layers 1 and 2 are thermoplastic or have exposed thermoplastic coatings. Preferably, the sealed zone is also cramped as indicated at 13. The remaining areas of the main body panel and the container-attaching flap are unsealed to the container.

The cover B is formed with the closure flap C along the edge of the main body panel opposite the fold-line 12. The closure flap is adapted to be juxtaposed to the wall 1 of the container and to engage the container-attaching flap f. The closure flap may be a single panel, but is preferably formed of two panels 14 and 15 as shown, they being hinged to each other by a fold-line 16. The closure flap panel 15 is adapted to be folded at 16 against panel 14 and both closure flap panels may be folded at fold-line 17, so that the edge defined by the fold 16 may be removably tucked under the container-attaching flap f. The closure flap panels have a length or height slightly less than the corresponding dimension of the main body panel. To allow for the thickness of the container A and the commodities therein, and the protective guard member E, a narrow end panel 18, defined by fold-lines 17 and 19, is interposed between the main body panel b and the closure flap C.

As shown in Figs. 8 and 11, the mailing and package closure portion D is separably connected to the container-attaching flap f. Although means, such as a staple or staples, adhesive, or adhesive tape, may be used to make the separable connection of the parts in abutting or overlapping relation, it is preferred to make the mailing and package closure portion an integral part of the cover B, and for this purpose the edge of the container-attaching flap, designated 20 (Fig. 11), is detachably connected to the portion D by a scored line or line of perforations 21.

The mailing and package closure portion D comprises an addressing panel e, package closure means e and a connecting portion 24 providing a section of cover material to bridge the space between the addressing panel and the container-attaching flap. The addressing panel has substantially the same length and breadth as the main body panel. The connecting section and the container-attaching flap have a combined length substantially equal to the length of the main body panel. Each of the aforementioned portions or panels of the cover are of equal breadth as shown. An end panel 25 may be located intermediate the connecting section 24 and the addressing panel e to accommodate the thickness of the container A, its contents and the guard member or members E.
The end panel is defined by fold-lines 26 and 27, and is adapted to overlie the end panel 18 when the package is closed and ready for mailing. A fold-line 28 is located between the addressing panel a and the package closure means.

The package closure means of the mailing and package closure portion of the cover is formed by die-cutting the cover material to furnish a pair of two separate, substantially triangularly-shaped locking sections 29 and 30, separated from each other by a central longitudinally extending slit 31. At the completion of each locking section, locking tabs 32 and 33 are provided for cooperation with a locking slot 34, which may be located on either the container-attaching flap f, the connecting section 24, or intermediate these two portions of the cover, as shown, on the scored line 21. The breadth of each locking tab is less than the length of the locking slot. At the base of each locking tab, the material is recessed, as indicated at 35, so that at these areas the combined breadth of both tabs is less than the length of the locking slot. This arrangement permits each locking tab to be individually inserted or removed from the locking slot, whereas when both tabs are in the locking slot the package is closed and the cover is maintained closely surrounding the container.

As shown in Figs. 8, 10, 12, 13 and 14, the articles 5 are protected against damage, such as crushing during shipping, with each sheet having a plurality of openings 38 therethrough so spaced that one may register with each of the compartments 4 when one of the sheets is laid upon the container, which is juxtaposed to the cover. The openings encircle the compartments and are substantially larger in diameter than the articles. The thickness of each sheet is greater than the distance that the compartment walls project from the general plane of the container and about equal to the distance of the closure flap or the main body panel of the cover and the portions of the container surrounding the compartment. The aggregate thickness of the sheets 36 and 37 is greater than the thickness of the compartments containing the articles, as best shown in Figs. 13 and 14. Thus, when the guard sheets 36 and 37 are disposed on opposite sides of the container with the openings 38 in register with the respective compartments 4, and with the closure flap C in closed position, the guard sheets will be prevented by the projection of the articles and compartment walls into the openings 38 from sliding laterally away from the container and out of the cover. When the closure flap C is opened and removed from under the container-attaching flap f, the uppermost guard sheet may be swung away from the container, from the position shown in Fig. 8 to the position shown in Fig. 12, so that the sub-packages can be easily separated from the container along the scored lines 6. If desired, both guard sheets may be easily slipped out of the package and thrown away, the sheets being intended primarily to protect the tablets during shipment. This protecting guard structure and its relationship to the container of commodities is more fully described in the pending patent application of Lloyd I. Volkening, Serial Number 499,690, filed April 6, 1955, now Patent No. 2,780,355, having the same assignee as the assignee of the present invention.

The completed or combined package and mailing cover as received by the addressee is shown in Figs. 1, 2 and 13. The main body panel b is juxtaposed to the wall 2 of the container. The container-attaching flap f is juxtaposed to the opposite wall, or wall 1. The marginal extension 7 is intermediate the adjacent edge of the main body panel and the container-attaching flap by the sealed zone 13. The closure flap portion C is removable received under the container-attaching flap f.
at its outer extremity, so that upon detachment of the tab along the scored line 45, the tab furnishes an index card. This index card formed portion of the closure means is printed with suitable information by the manufacturer of the packaged commodity, so that in addition to the address being furnished, this portion of the cover may be used to index for reference the pertinent information printed thereon. The index card may be separated from the cover immediately after opening of the package, as shown in Fig. 18.

When the package is in closed condition ready for mailing, as shown in Figs. 15, 16 and 17, the panel 14 is justifiably to the wall 1 of the container A, and engages, or is juxtaposed to, the outside of the container-attaching flap f. The other closure flap panel 15 is folded at 16 and back over onto panel 14. The locking panel 41 is juxtaposed to the side of the main body panel b opposite the side juxtaposed to the container A. The addressing panel c overlaps the closure flap panel 15, and the package closure means e, or the locking tab 46 is, of course, on the opposite side of the closed package and disposed in the locking slot 43 of the locking panel.

After the package has been opened, and the mailing and packaging closure portion D has been separated from the cover B, as shown in Fig. 20, the closure flap panel 15 is folded at 16 onto the closure flap panel 14, and both panels are folded at 17, so that the edge defined by the fold 16 may be removably tucked under the container-attaching flap f, as shown in Fig. 23.

In the embodiment of the invention illustrated in Figs. 24 to 29, the cover B is similar to the cover illustrated in Figs. 14 to 23, except that the closure flap C comprises a single panel 48, or a double panel, one of which, designated 49, also constitutes a locking panel having a locking slot 50 to receive the package closure means e. The mailing and packaging closure portion D may be separately connected to the cover by a scored line 51 between the addressing panel and the locking panel, or by a scored line 52 between the panel 49 and the panel 48. If a double-panel closure flap is desired, the mailing and packaging closure portion D is separated from the cover along the line 51, whereby the panel 49 is folded against the panel 48 along the fold-line 52, and the edge of the folded panels defined by the fold 52 is removably tucked under the container-attaching flap f when the combined package and mailing cover is converted to a "carry" package. If it is desired to have a closure flap comprising a single panel, then the fold-line 52 is scored for detachment along this line, whereby the panel 52 is folded over onto the container A with the edge 52 removable received under the container-attaching flap f.

The package closure means e is hinged to the addressing panel a by a fold-line 53. This portion of the cover is die-cut to provide a locking tab 54 having a width permitting the tab to be removably inserted into the locking slot 50 when the cover is closed to closely surround the container A. The package closure means is provided with two transversely extending and longitudinally spaced fold-lines 55 and 56, so that after the tab 54 is inserted into the locking slot 50, an object, such as a pencil, may be inserted into the space of the package and the tab reverse-bent or pushed in the direction indicated by the arrow in Fig. 28, whereupon the tab is locked within the interfold provided by the fold-line 55 and the fold-line 56, as shown in Fig. 29.

It will be apparent that the means for locking the cover closely surrounding the container A, as shown in the latter embodiment of the invention, may be used in the forms of the invention illustrated in Figs. 1 to 14, or in Figs. 15 to 23. Also, the index card feature of the package closure means of Figs. 15 to 23 may be utilized as the package closure means of the cover structure shown in Figs. 1 to 14, or Figs. 15 to 23, the cooperating locking slot, of course, being made of a width sufficient to receive the package closure means or locking tab.
9 taching flap adjacent the fold, the opposite edge of said main body panel being provided with a closure flap adapted to be removably received under said container-attaching flap, and a mailing and package closure portion comprising an addressing panel and package closure means for maintaining the cover closely surrounding said container but providing for opening of the cover to open the package for access to said container, said addressing panel being separably connected to said container-attaching flap along one edge thereof and said closure means being connected to said addressing panel along the opposite edge of said main body panel, said package closure panel being connected to the opposite edge of said addressing panel by a fold-line and adapted to be juxtaposed to the container-attaching flap side of the package, a locking tab provided by the package closure panel adapted to be removably received in said slot to thereby maintain said cover closely surrounding said container by providing for opening of the cover to open the package for access to said container.

5. A combined package and mailing cover comprising an approximately flat commodity container having thin flexible walls providing at least one compartment in which a commodity is enclosed, said container including a marginal extension, and a relatively stiff but flexible cover, said cover comprising a main body panel having a length and breadth slightly larger than the length and breadth of said container and juxtaposed to one wall of the main body panel, said marginal extension being located intermediate the main body panel and the container-attaching flap and secured to the container-attaching flap adjacent the fold, the opposite edge of said main body panel being provided with a closure flap adapted to be removably received under said container-attaching flap, and a mailing and package closure portion comprising an addressing panel and package closure means for maintaining the cover closely surrounding said container but providing for opening of the cover to open the package for access to said container, said addressing panel being separably connected to said closure flap along one edge thereof and said closure means being connected to said addressing panel along the opposite edge, said addressing panel having substantially the same dimensions as said main body panel and adapted to be juxtaposed thereto, said closure means adapted to be juxtaposed to the container-attaching flap side of the package.

3. A combined package and mailing cover comprising an approximately flat commodity container having thin flexible walls providing at least one compartment in which a commodity is enclosed, said container including a marginal extension, and a relatively stiff but flexible cover, said cover comprising a main body panel having a length and breadth slightly larger than the length and breadth of said container and juxtaposed to one wall of the main body panel, said package closure panel being connected to the opposite edge of said address panel by a fold-line and adapted to be juxtaposed to the container-attaching flap side of the package, a locking tab provided by the package closure panel adapted to be removably received in said slot to thereby maintain said cover closely surrounding said container by providing for opening of the cover to open the package for access to said container.
and breadth slightly larger than the length and breadth of said container and juxtaposed to one wall of the container, a container-attaching flap connected to one edge of the main body panel and folded over upon the opposite wall of the container, said marginal extension being located intermediate the main body panel and the container-attaching flap and secured to the container-attaching flap adjacent the fold, the opposite edge of said main body panel being provided with a closure flap adapted to be removable received under said container-attaching flap, and a mailing and package closure portion comprising an addressing panel and package closure means for maintaining the cover closely surrounding said container but providing for opening of the cover to open the package for access to said container, said addressing panel being separably connected to said closure flap along one edge thereof and said closure means being connected to said addressing panel along the opposite edge, said addressing panel having substantially the same dimensions as said main body panel and adapted to be exposed on one side of the package when closed, said closure means adapted to be disposed on the opposite side of the package, said closure means including a locking tab adapted to be reverse-bent intermediate its edges.

8. A combined package and mailing cover comprising an approximately flat commodity container having thin flexible walls providing at least one compartment in which a commodity is enclosed, said container including a marginal extension, and a relatively stiff but flexible cover formed of a single strip of material, said cover comprising a main body panel having a length and breadth slightly larger than the length and breadth of said container and juxtaposed to one wall of the container, a container-attaching flap connected to one edge of the main body panel and folded over upon the opposite wall of the container, said marginal extension being located intermediate the main body panel and secured to the container-attaching flap adjacent the fold, the opposite edge of said main body panel being provided with a closure flap adapted to be removable received under said container-attaching flap, and a mailing and package closure portion comprising an addressing panel, a locking panel having a locking slot therein and a package closure panel, said locking panel having one edge thereof connected to one edge of the addressing panel by a fold-line, the other edge of the locking panel being separably connected by a scored line to the closure flap, said addressing panel having substantially the same dimensions as said main body panel and adapted to be exposed on one side of the package when closed, said package closure panel being connected to the opposite edge of said addressing panel by a fold-line and adapted to be disposed on the opposite side of the package and inserted into said locking slot and to maintain the cover closely surrounding said container by providing for opening of the cover to open the package for access to said container.

9. A combined package and cover comprising an approximately flat commodity container having thin flexible walls providing at least one compartment in which a commodity is enclosed, and a relatively stiff but flexible cover comprising an elongated strip of material secured to and closely wrapped around the container but providing for unwrapping and opening of the cover to open the package for access to the container, a locking slot formed in said cover strip intermediate its ends and a locking tab provided at one end of the cover strip adapted to be removably received in the locking slot, said container including a marginal extension, a portion of said cover strip providing a main body panel having a length and breadth slightly greater than the length and breadth of the container and juxtaposed to one wall of the container, another portion of said cover strip providing a container-attaching flap having a margin extending transverse of the cover strip adjacent and parallel to a margin of said body panel and juxtaposed to the opposite wall of the container, said marginal extension of the container being secured to the cover strip between said main body panel and said container-attaching flap, the opposite margin of said main body panel being provided with a closure flap juxtaposed to said opposite wall of the container and engaging the container-attaching flap, and said cover strip also providing a mailing and package closure portion including an addressing panel and package closure means connected to said addressing panel for maintaining the cover in closely surrounding relation to the container but providing for unwrapping of the cover to open the package for access to the container, said package closure means including said locking tab removably inserted into said locking slot.

10. A combined package and cover as defined in claim 9 wherein said locking tab comprises an index card, said mailing and package closure portion are separably connected to said closure flap, and said locking tab index card is separably connected to the mailing and closure portion.

11. A combined package and mailing cover as set forth in claim 9 wherein said addressing panel has substantially the same dimensions as said body panel and is adapted to be exposed on one side of the package when closed, said locking tab is adapted to be reverse-bent intermediate its edges, and said mailing and package closure portion is separably connected to said closure flap.

References Cited in the file of this patent

UNITED STATES PATENTS

1,330,259 Goldberg Feb. 10, 1920
1,945,927 Watson Feb. 6, 1934
2,319,560 Salishberg May 18, 1943
2,324,541 Salishberg July 20, 1943
2,522,256 Croft Sept. 12, 1950
2,589,755 Salishberg Mar. 18, 1952
2,737,290 Volckening et al. Mar. 6, 1956
2,759,658 Sawdon Aug. 21, 1956
2,783,877 Volckening et al. Mar. 7, 1957

FOREIGN PATENTS

186,115 Switzerland Nov. 16, 1936