March 11, 1969 B. NATHAN ET AL 3,432,028

PACKAGE FOR A MIRROR AND THE LIKE

Filed April 8, 1968 Sheet 1 of 2

FIG. 1

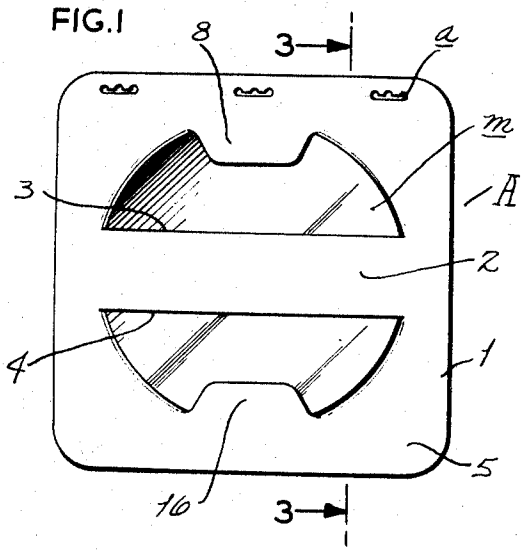


FIG. 2

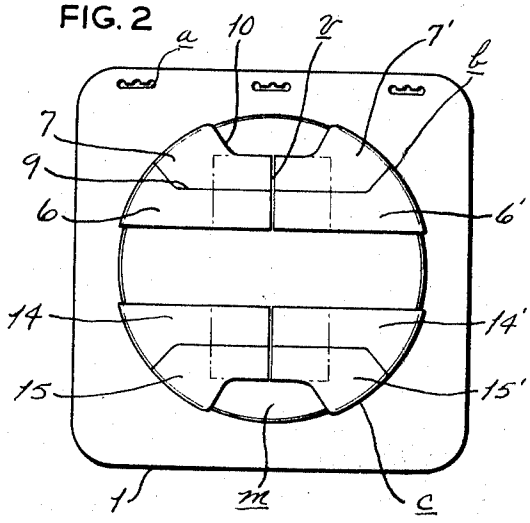


FIG. 3

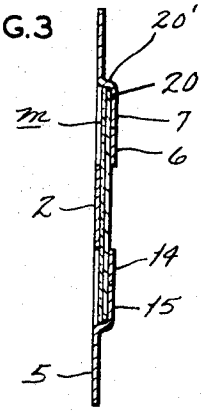
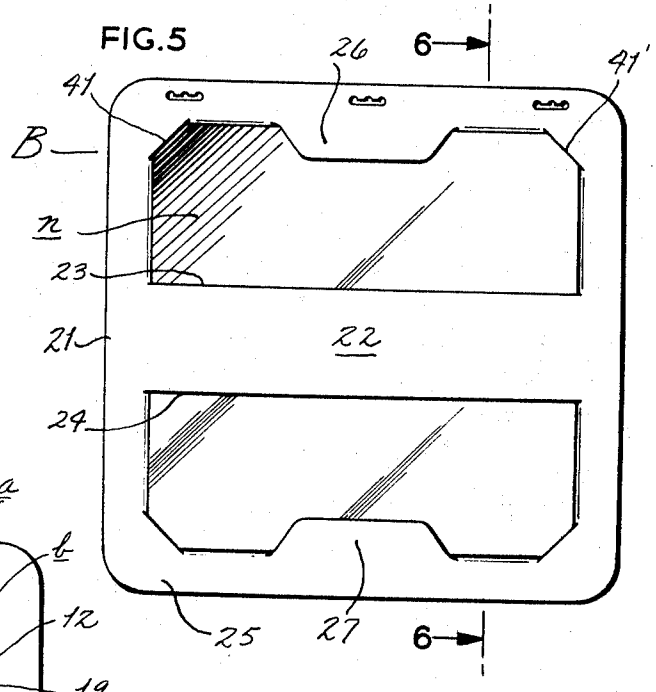


FIG. 5



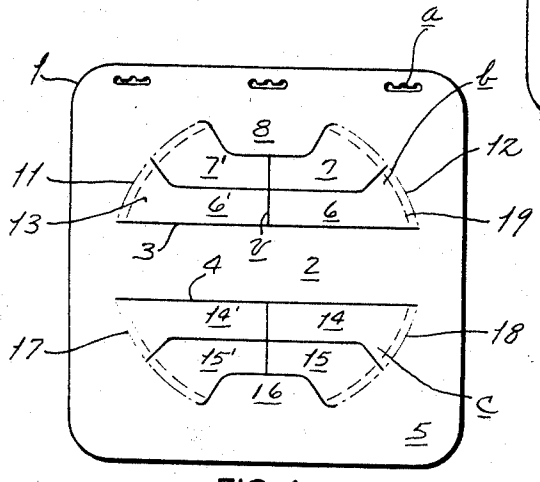


FIG. 4

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FIG.6

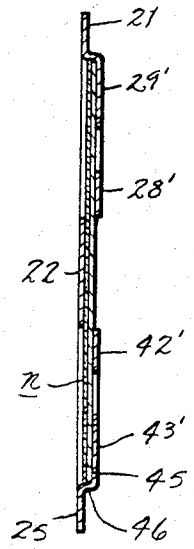


FIG.7

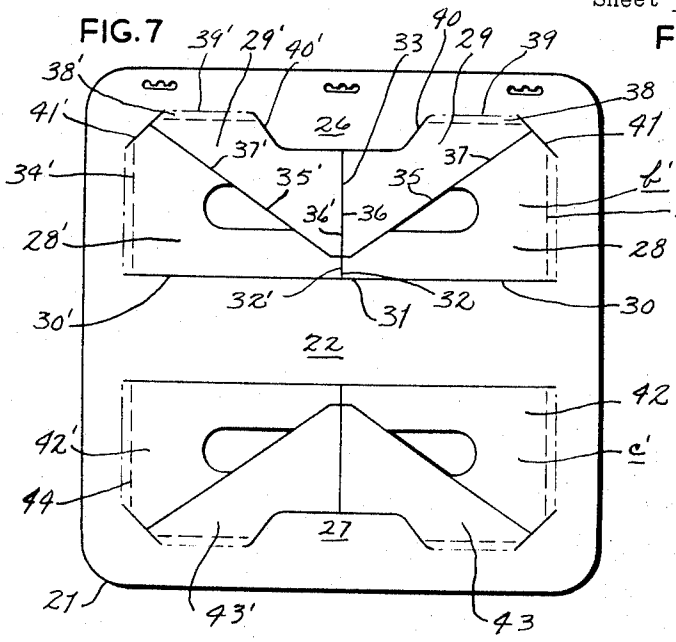


FIG.9

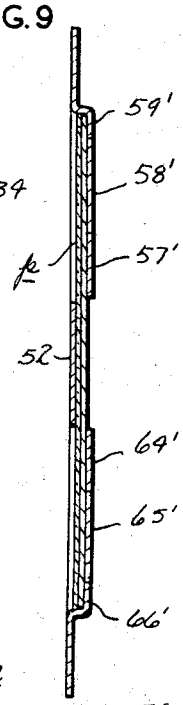


FIG.8

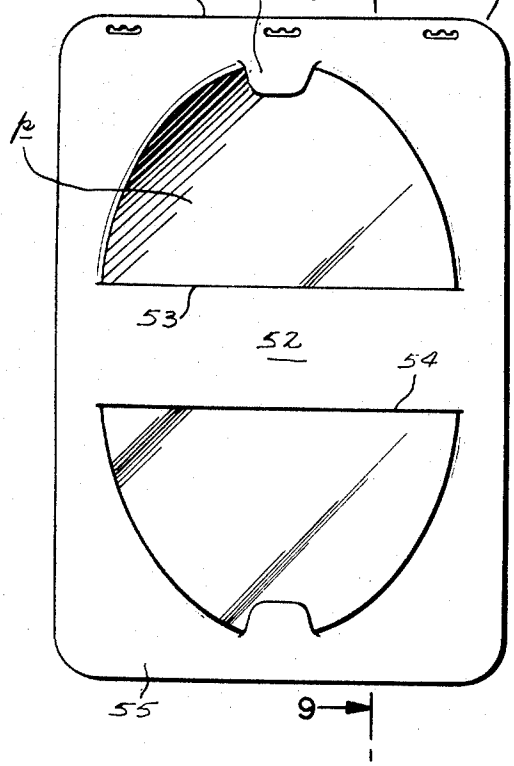
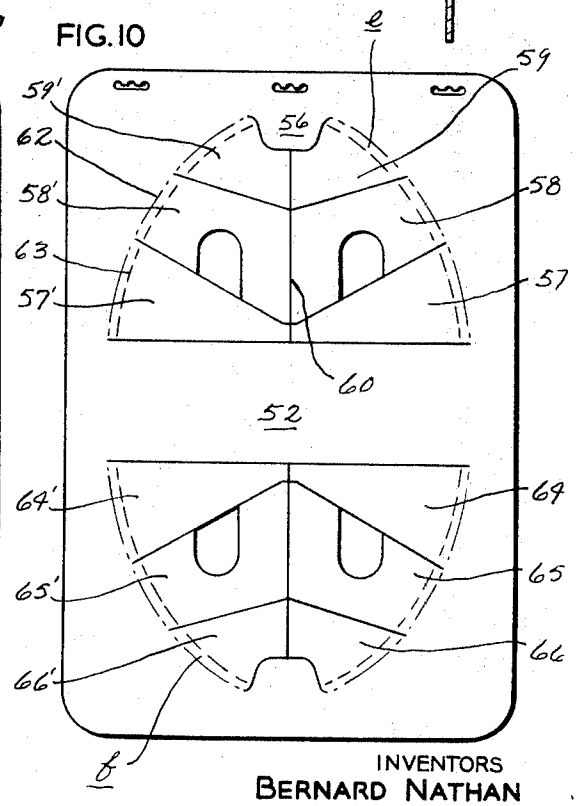


FIG.10



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PACKAGE FOR A MIRROR AND THE LIKE

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Filed Apr. 8, 1968, Ser. No. 719,353
U.S. Cl. 206—62 8 Claims
Int. Cl. B65d 85/46, 85/48

ABSTRACT OF THE DISCLOSURE

A package for a mirror and like flat, relative rigid material constructed from a single blank of preferably corrugated or like matter and being suitably die cut and formed to present a mirror-receiving compartment substantially centrally of the sheet so that portions of said sheet, and within the plane thereof, will overlie the forward face of said mirror, while other portions of said sheet will underlie the rear face of said mirror and be presented in planar parallel relationship to the plane of said sheet; there being openings for exposing portions of said mirror to inspection.

Background of the invention

This invention relates generally to packaging and, more particularly, to a novel package for flat relatively rigid yet breakable material, such as, particularly, mirrors, which package is uniquely adapted for facilitating safe transportation of the mirror, as well as for protected display of the same. Heretofore, in view of the acknowledged fragile character of mirrors, the same have been subjected to costly packaging for shipping purposes with the entailment of consumption of considerable time for effecting such packaging. Furthermore, to the present time, mirrors presented for display purposes in retail establishments have normally been either wall suspended or placed upon supports which require the mirror to be totally exposed and, hence, potentially subject to breakage through accident, as well as careless handling by customers and sales personnel. Additionally, the sale of such mirror at retail would necessitate the repackaging of the same for safe transmittal by, or to, the customer.

Summary of the invention

Therefore, it is an object of the present invention to provide a package for mirrors and the like material which is uniquely adapted for both shipping and display purposes whereby the same may be exhibited to potential customers without removal from the original package and without requiring further repackaging.

Another object of the present invention is to provide a package of the type stated which simultaneously, effectively protects the contained article against damage through rough and careless handling while permitting ready inspection thereof.

It is a further object of the present invention to provide a package of the type stated which may be suitably adapted for containing mirrors and the like of varying configurations.

It is another object of the present invention to provide a package of the type stated which may be most economically produced; which is easily utilized for packing and unpacking operations so that the same may be effected by the average unskilled individual; which is most durable and reliable in usage and which provides for desired protection of the contained device.

Brief description of the drawings

FIGURE 1 is a front view of a package constructed in accordance with and embodying the present invention, illustrating a mirror contained therein.

FIGURE 2 is a rear view.

FIGURE 3 is a vertical transverse sectional view taken on the line 3–3 of FIGURE 1.

FIGURE 4 is a front view of said package in empty condition.

FIGURE 5 is a front view of another form of package constructed in accordance with and embodying the present invention.

FIGURE 6 is a vertical transverse sectional view taken on the line 6—6 of FIGURE 5.

FIGURE 7 is a rear view of the package shown in FIGURE 5 illustrating same in empty condition.

FIGURE 8 is a front view of a further form of a package constructed in accordance with and embodying the present invention, illustrating a mirror contained therein.

FIGURE 9 is a vertical transverse sectional view taken on the line 9—9 of FIGURE 8.

FIGURE 10 is a rear view of the package shown in FIGURE 8 illustrating same in empty condition.

Description of practical embodiments

Referring now by reference characters to the drawings which illustrate practical embodiments of the present invention, A generally designates a package for a flat article which may be of relatively rigid, yet breakable material, such as, especially, a mirror. Package A is formed from a single blank **1** of suitable sheet material, preferably corrugated paper as in the range of ⅛″ to ¼″ in thickness. Blank **1** is contoured in any artistic manner for accommodation of the particular article, such as mirror *m*, and thus, for example, may be of square or rectangular form. As blank **1** may be provided with a series of spaced openings *a* adjacent one transverse margin of said blank **1** to facilitate suspension, as by any conventional bracket for display purposes, package A will be described hereinbelow from the standpoint of being so suspended or in vertical disposition.

In its central portion, blank **1** is cut, as by a die, to provide a series of upper and lower flaps, indicated generally at *b*, *c* which, in a manner to be described, are adapted for swingable movement away from and toward the plane of blank **1** for purposes presently appearing. Upper and lower flap series *b*, *c* respectively, are separated by a central transverse band **2** having upper and lower parallel edges **3**, **4** and with the ends of said band **2** being continuous with the opposed side regions of a frame portion **5** of said blank **1** which surrounds said flap series *b*, *c* and band **2**. The flaps of upper series *b* are in paired relationship as at **6**, **6′** and **7**, **7′** with the components of each of said pairs being disposed on the opposite side of, and in free end edge-to-edge relationship along, the vertical center line of blank **1** along which there is a line of cutting, as at *v*, which extends between edge **3** of transverse band **2** and a tab member **8**. The bottom edges of flaps **6**, **6′** abut upper edge **3** of band **2**, while the upper edges of said flaps **6**, **6′** are opposed to the lower margins of the respective flaps **7**, **7′** along a transverse line of cutting **9**. The upper edges of flaps **7**, **7′** are cut, as at **10**, for conformity to the contour of tab **8**. The outer edge portion of each flap **6**, **7** and **6′**, **7′**, although structurally continuous with frame **5**, is weakened along arcuate fold lines **11**, **12**, respectively, which extend between the adjacent end of edge **3** of band **2** and the proximate end edge of tab **8**; each of said flaps being widened in the region of the respective fold lines **11**, **12**, as at **13**, for enhancing the extent of the relative fold portions for strengthening purposes. Thus, each flap **6**, **7**, **6′**, **7′** may be swung so as to be moved away from the plane of blank **1** about its curvate line of fold to an

ultimate position of maximum opening wherein it would be in back to back relationship with said blank **1**.

The series of lower flaps *c* are of identical construction as flaps **6**, **6'**, **7**, **7'** of upper series *b*, but are in reversed relationship to provide desired symmetry, said series *c* thus comprising flaps **14**, **14'** which correspond to flaps **6**, **6'**, and flaps **15**, **15'** which correspond to flaps **7**, **7'**; there being a tab **16** in corresponding relationship to tab **8** above described. It will thus be seen that tabs **8**, **16** are unbrokenly continuous with frame portion **5** and are hence at all times aligned planarwise with band **2**. Flaps **14**, **15** and **14'**, **15'** of lower series *c* are adapted for swingable movement along arcuate fold lines **17**, **18** which correspond in all respects to fold lines **11**, **12** above described. Each flap of series *b*, *c*, inwardly of the related fold lines **11**, **12**, **17**, **18**, as the case may be, is provided with a scored line, as at **19**, so as to effect a bending or folding of each flap therealong. Lines of scoring **19** are, understandably, arcuate, being formed along the same center as the adjacent fold line and being spaced from the latter a distance commensurate with the thickness of the article, such as mirror *m*, thereby accommodated by package A. Accordingly, when the flaps of series *b*, *c* are folded upwardly along their related fold lines **11**, **12** and then bent downwardly about their related scored lines **19**, the said flaps may be presented in a plane which is parallel to that of blank **1** and being spaced rearwardly therefrom by the distance between the fold lines **11**, **12**, **17**, **18** and the scored lines **19**. In this condition it will be seen that a compartment, as at **20**, is formed which on its front face is defined by tabs **8** and **16** and band **2**, on its sides by the distance intervening the aforesaid fold lines and scored lines, which is indicated at **20'**, and on its rearward face by the flaps of series *b* and series *c*. It is, of course, now apparent that package A above described has been designed for receiving a circular mirror, the contouring of which is necessarily dictated by the arcuate nature of fold lines **11**, **12**, **17**, **18**, as well as of scored lines **19**; thereby endowing compartment **20** with an annular character.

In operation, blank **1** may be placed face downwardly so that the flaps of series *b*, *c* may be swung upwardly and then outwardly and downwardly to permit of the presentation of mirror *m* in flatwise disposition upon the rear faces of tabs **8** and **16** and band **2**. Since mirror *m* has a thickness substantially equivalent to the side portion **20'** of compartment **20**, it will tend to cause same to be presented in operative position so that the flaps of series *b*, *c* may then be swung inwardly and downwardly into flatwise disposition upon the rear face of mirror *m*. In this condition, mirror *m* will thus be snugly received within compartment **20**, and suitable adhesive means may be used for engaging the adjacent ends of each pair of flaps **6**, **6'**, **7**, **7'**, **14**, **14'** and **15**, **15'** which, for example, may be tape, glued paper, or the like, thereby rendering compartment **20** in a secured, closed state for safe retention of its contents. It is to be further observed that compartment **20** has an inside diameter when in formed state which substantially coincides with the outside diameter of the accepted mirror *m* so that the latter will be restrained against shifting when in retained condition.

Referring now to FIGURE 1, it will be seen that portions of mirror *m* will be exposed through the spacing between band **2** and tabs **8** and **16** respectively, as at *d*, *d'*, respectively, and thus readily visible for display purposes. It is, of course, understood that the surrounding regions of frame portion **5** may have suitably inscribed thereon advertising matter and the like. With mirror *m* so retained, package A can be easily handled without danger of damage to mirror *m* and is thus amenable to ready transportation, as well as for display purposes.

For removing mirror *m* the user need merely separate the mutually secured flaps of each series *b*, *c* as by severing the tape or the like, and then fold said flaps about

their scored lines **19** so as to provide sufficient clearance for removing mirror *m*.

Referring now to FIGURES 5–7 of the drawings, B generally designates a package for accommodating a flat article, such as a mirror *n* and being fabricated from a single blank **21** of sheet material as corrugated paper, cardboard, etc. Blank **21** is formed, as by stamping, to incorporate a central transverse band **22** having upper and lower parallel edges **23**, **24**, respectively; said band **22** being continuous at its ends with a frame portion **25** which latter integrally embodies opposed, symmetrically related, upper and lower retaining tabs **26**, **27**; all of said components being substantially structurally similar to the corresponding componets of package A above described.

In its central portion, blank **21** is cut, as by a cutting die, to provide a series of upper and lower flaps indicated generally at *b'*, *c'* which are respectively disposed between upper edge **23** of transverse band **22** and retaining tab **26**, and lower edge **24** of band **22** and retaining tab **27**, respectively. The flaps of series *b'* are in paired relationship, as at **28**, **28'**, **29**, **29'**. Flaps **28**, **28'** are each provided with a lower margin **30**, **30'**, respectively, which are separated from edge **23** of band **22** by a continuous line of cutting **31**; while said flaps **28**, **28'** are provided with relatively narrow inner confronting margins **32**, **32'** which are disposed along a vertical line of cutting **33** coincidental with the vertical center line of package B and axially normal to edge **23** of band **22**. The outer edge portions of flaps **28**, **28'** incorporate fold lines **34**, **34'**, as formed by a creasing die, which progress upwardly from their lower end adjacent band **22** and thus provide an axis about which flaps **28**, **28'** may be swung in a plane normal to that of blank **21** so as to be moved toward and away from said blank **21**. Connecting the free ends **32**, **32'** of blanks **28**, **28'**, respectively, and the upper portions of the respective fold lines **34**, **34'** is an inclined edge **35**, **35'**, respectively, being on a diagonal, as it were, so that said flaps are of general triangular configuration. Flaps **29**, **29'** comprise free ends extending along line of cutting **33**, as at **36**, **36'**, respectively, and lower margins, as at **37**, **37'** which confront edges **35**, **35'** of adjacent flaps **28**, **28'**.

Each of said flaps **29**, **29'** is provided with an upper relatively reduced transversely extending portion **38**, **38'** along which a fold line **39**, **39'** has been developed, as by a creasing die, so as to adapt said flaps for folding upwardly and away from the plane of blank **21** in a direction toward the adjacent end edge of said blank **21**. It is to be observed that flaps **29**, **29'** in their upper regions are cut away, as at **40**, **40'**, by reason of the configuration of the adjacent tab **26**. As may best be seen in FIGURE 5, the adjacent fold lines **34**, **39** and **34'**, **39'** are separated by a mitered portion, as at **41**, **41'**, which constitutes a corner tab for purposes presently appearing.

The flaps of series *c'* are identical in construction as the flaps of series *b'* and are related to the lower edge **23** of band **22** and tab **27** in the same manner as the aforesaid flaps of series *b'* are related to the upper edge **23** of band **22** and tab **26**. Thus, flaps **42**, **42'** correspond to flaps **28**, **28'** while flaps **43**, **43'** are counterparts of flaps **29**, **29'**. Each flap of each series, namely, **28**, **28'**, **29**, **29'**, and **42**, **42'**, **43**, **43'** is provided with a line of scoring **44** parallel to the related fold line **34** or **34'**, **39** or **39'**, as the case may be, with the intervening distance being determined by the thickness of the article, as mirror *n*, to be received so that such extent will constitute the side wall portion, indicated at **46**, of a compartment **45**, which is developed on its forward face by tabs **26**, **27**, mitered portions **41**, **41'**, and band **22**; with the flaps of each series *b'*, *c'*, when bent along their lines of scoring **44**, constituting the rear wall, and with the side wall **46** being developed as above stated. Thus, package B operates in the same manner as package A above described but reveals a slightly different arrangement of flaps for accommodating an article which is quadrilateral as op-

posed to circular. The mitered tabs **41, 41'** present added corner support for the mirror *n*.

Referring now by reference characters to FIGURES 9 and 10 there is illustrated a further form of package, indicated at C, which embodies the present invention. Package C is fabricated of a single blank **51**, as of corrugated paper, cardboard and the like, and is in all respects fundamentally similar to packages A and B above described, but is intended to accommodate a flat article, such as a mirror *p* which is of oval character. Thus, blank **51** incorporates a central transverse band **52** having upper and lower parallel edges **53, 54** and with the ends of said band being continuous with a surrounding coplanar frame portion **55**. Formed in the central portion of blank **51**, above and below band **52**, are an upper and lower series of flaps *e, f*, being die cut or otherwise stamped. The flaps of series *e* encompass an area between the upper edge **53** of band **52** and a retaining tab **56**, and comprise three pairs of flaps **57, 57', 58, 58', 59, 59'**, the inner edges of which are all formed along a line of cutting **60** which is coincidental with the vertical center line of blank **51**, and with the outer edge portions of each of said flaps being determined by a fold line, as indicated at **62**, which latter, in each instance, is formed upon an arc requisite for receiving oval mirror *p*. Thus, each of said flaps **57, 57', 58, 58', 59, 59'** will be foldable into open position away from the plane of blank **51** along such arcuate fold lines; it being recognized that adjacent fold lines are formed on different centers in view of the ovate nature of the accommodated article. Each of said flaps of series *e* is provided with a scored line **63** provided proximate the respective fold line **62** but being inwardly spaced therefrom a distance corresponding to the thickness of article *p* so that such spacing will constitute the appropriate side wall for the receiving compartment to be developed by the plane of blank **51**, the flaps of series *e* and *f* and such side wall portions as aforesaid.

Flap series *f* comprises paired flaps **64, 64', 65, 65', 66, 66'** which respectively correspond structurally and functionally to flaps **57, 57', 58, 58', 59, 59'** of series *e* above. Thus, package C operates in the same manner as packages A and B but, as stated, is illustrated for demonstrating the extreme versatility of the present invention for accommodating articles of various configurations.

It is understood that changes and modifications in the formation, construction, and arrangement and combination of the several parts of the package for a mirror and the like may be made and substituted for these herein shown and described without department from the nature and principle of our invention.

Having described our invention what we claim and desire to obtain by Letters Patent is:

1. A package for a flat article formed from a single blank of sheet material and comprising a flat body portion, first and second series of flap members cut from said blank, each flap member of each series being connected to the body portion through a first fold line about which each said flap may be swung toward and away from the plane of said body, each flap being further provided with a second fold line spaced from said first fold line for bending about said second fold line for presentation in a plane parallel to the plane of said body, and means for connecting adjacent flaps.

2. A package for a flat article as defined in claim **1** and further characterized by the distance between said first and second flaps being commensurate with the thickness of the article to be received.

3. A package for a flat article as defined in claim **2** and further characterized by each of said flaps being free at their inner ends.

4. A package for a flat article as defined in claim **3** and further characterized by the flaps of each series being in paired relationship with the free ends of each member of each pair being in immediate adjacency when the flaps are in closed relationship.

5. A package for a flat article as defined in claim **4** and further characterized by the free ends of said flaps being substantially aligned with a center line of said body.

6. A package for a flat article as defined in claim **5** and further characterized by a transverse portion of said body being interposed between said first and second series of flaps.

7. A package for a flat article as defined in claim **6** and further characterized by tab portions co-planar with said body and said transverse portion being provided at the opposite ends of each of said first and second flap series.

8. A package for a flat article as defined in claim **7** and further characterized by said body having an article receiving compartment defined on one face by said tab portions and said transverse portion, on its opposite face by the series of flaps, and on its side face by the spacing between said first and second fold lines.

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JAMES B. MARBERT, *Primary Examiner.*