

# United States Patent

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[15] 3,683,987

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[54] **KNOCK-DOWN FOLDING PACKAGE**  
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[22] Filed: **Sept. 8, 1970**

## [57] ABSTRACT

[21] Appl. No.: **70,041**

### Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 888,511, Dec. 29, 1969, Pat. No. 3,623,526.

### [30] Foreign Application Priority Data

July 28, 1970 Canada.....89,356

[52] U.S. Cl. ....150/52 R, 229/87 R

[51] Int. Cl. ....B65d 75/14

[58] Field of Search.....150/52 B, 52 R, 52 C; 229/87 R

### [56] References Cited

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A flat envelope is provided which is formed from a single blank of flexible light-weight material. The envelope includes a central area and a plurality of flaps (for example, four flaps) extending outwardly from the central area. The flaps may be folded one upon the other to provide a central compartment to hold articles. Means for releasably retaining the flaps in a folded condition are provided associated with the flaps, such means preferably consisting of "VELCRO" coupling members. The inside face of at least one, and preferably all, the flaps, i.e., the face where the active face of the releasable retaining means is provided, is formed with one or more interior, integral article-receiving pockets, suitable, for example, for receiving and holding pens, pencils, etc.

**3 Claims, 3 Drawing Figures**

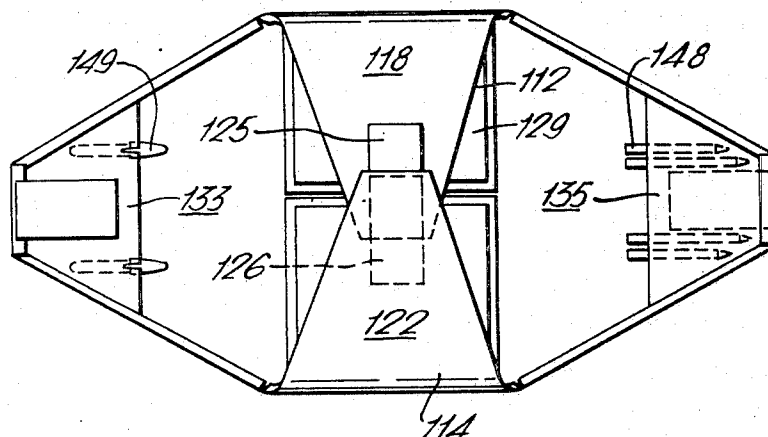
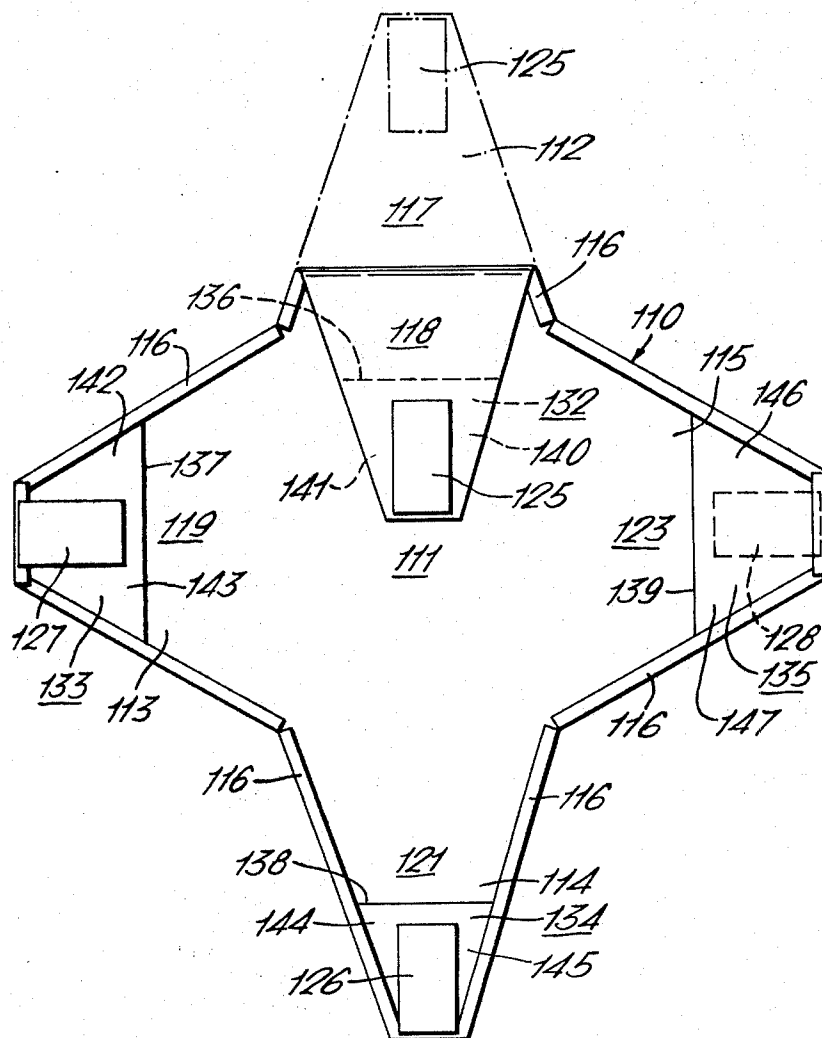


FIG. 1.



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FIG. 2.

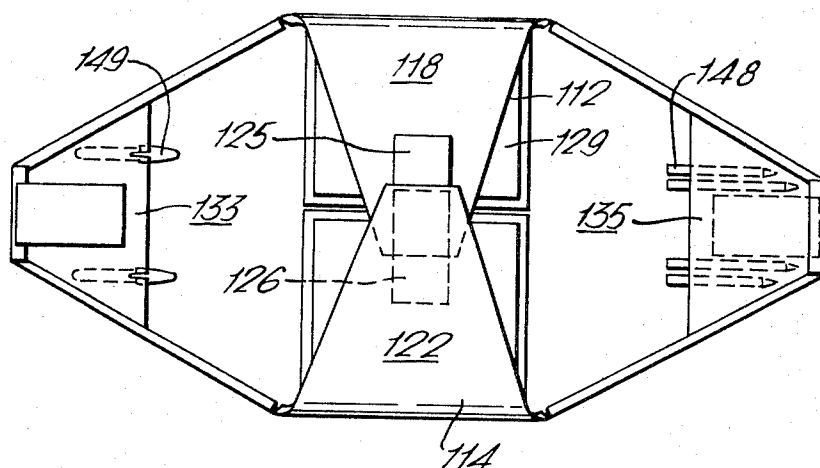
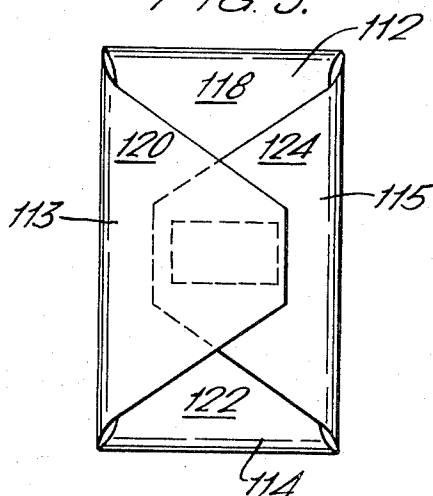


FIG. 3.



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## KNOCK-DOWN FOLDING PACKAGE

This application is a continuation-in-part of application Ser. No. 888,511 filed Dec. 29, 1969, now U.S. Pat. No. 3,623,526 issued Nov. 30, 1971.

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

This invention relates to a novel flat envelope for carrying one or a plurality of two different types of individual articles. More particularly, it relates to a novel flat envelope for the carrying of books, more particularly, school books and also other elongated articles, e.g., pens or pencils.

#### 2. Description of the Prior Art

Occasionally, the need arises to carry a plurality of articles in a single package where it is impossible or inconvenient to carry those same plurality of articles in one's hands. This occurs most often with respect to school books.

For certain aesthetic and conventional reasons, certain groups of students prefer not to avail themselves of the use of school bags or brief-cases or attache cases to carry their books. The need therefore exists to provide such group of students, usually so-called high school students, with a means for carrying their school books.

As well as the need for students to carry their school books is a need for them to carry writing implements or other elongated articles.

#### 3. Objectives of the Invention

An object of this invention is the provision of a light-weight, compact, relatively inexpensive means for carrying a plurality of two different types of articles.

An object of another aspect of this invention is the provision of a light-weight, compact, weatherproof, waterproof, means for carrying one or a plurality of school books, and for the simultaneous carrying of elongated articles, e.g., pens, pencils, etc.

### SUMMARY OF THE INVENTION

#### Broad Statements of the Invention

By a broad aspect of this invention, a flat envelope is provided for carrying one or a plurality of two different types of individual articles. The envelope is basically a sheet of lightweight, flexible, relatively tough, relatively strong material. The sheet includes: (a) a central, generally rectangular area free of apertures, and (b) two pairs of mutually opposed flaps, each flap being one-piece with said central area and being of truncated triangular shape. Each flap of such pair of mutually opposed flaps is provided with an interior integral, article-receiving compartment on its inside face. Each flap of such pair of mutually opposed flaps is also provided with co-operating, releasably interengageable means. These releasably interengageable means comprise a pair of interengageable surfaces in the form of a primary component and a secondary component, such surfaces being provided with a plurality of hooking elements, certain of the hooking elements comprising hooks and certain of the elements comprising loops, and characterized by the property that pressing opposed surfaces of the hooking elements together in face-to-face relation will result in hooks engaging loops to hold the surfaces together. These releasably interengageable means are located at the truncated triangular apex of the flaps. They, furthermore, must satisfy

the requirement that a primary component of the co-operating, releasably interengageable means is disposed on the outside face of one selected flap of a first pair of mutually opposed flaps, and that a secondary component of the co-operating, releasably interengageable means is disposed on the inside face of the other flap of the first pair of mutually opposed flaps. Because of this particular structure, one or a plurality of elongated articles e.g., pens, pencils, etc.) may be placed within at least one of such interior article-receiving compartments and held therein. Also, one or a plurality of the other type of distinct articles may be placed on the central area and be completely retained within the confines of the envelope by the following steps: (1) Fold one selected flap of a randomly selected pair of mutually opposed flaps over the article or articles and then fold the other flap over the selected flap. This step temporarily secures the other flap to the selected flap with the article or articles disposed between the flaps and the central area. (2) Fold one selected flap of the other pair of mutually opposed flaps over the randomly selected pair of temporarily secured flaps and then fold the other flap over the selected flap. This temporarily secures the other flap to the selected flap, with the article or articles and the randomly selected, temporarily secured flaps between the other pair of temporarily secured flaps and the central area.

The sheet used to form the package should be formed of a tough, strong, weatherproof, waterproof, light-weight, flexible material. Examples include rubberized fabric, waterproof canvas, vinyl plastics, polyolefin films, or even specially treated paper.

The releasably interengageable means could be closely spaced apart snap fasteners, or coacting pressure sensitive adhesives which are capable of many adhesion-releasing couples. Preferably, however, it is the material known as "Velcro" and taught by one or more of the following Canadian Pat. Nos.:

709,760, Jean Billarant; May 18, 1965;

714,740, Velcro S.A.; Aug. 3, 1965;

745,365, Jean Billarant; Nov. 1, 1966; 748,105, Jean Billarant; Dec. 13, 1966; 789,767, Velcro S.A.; July 16, 1968; 796,914, Velcro S.A.; Oct. 22, 1968; 815,769, American Velcro, Inc.; June 24, 1969.

"Velcro" may be described as a pair of interengageable surfaces, each surface being provided with a plurality of hooking elements, certain of the hooking elements comprising hooks and certain of the hooking elements comprising loops, and characterized by the property that pressing opposed surfaces of the hooking elements together in face-to-face relation will result in a large number of hooks engaging a large number of loops to hold the surfaces together.

In the second embodiment, the article-receiving pockets have the peripheral edges secured to the outside edges of the flaps. The central part of the pocket is divided by the stitching holding the "Velcro" to the flap.

### DESCRIPTION OF PREFERRED EMBODIMENTS

#### Brief Description of the Drawings

In the accompanying drawings:

FIG. 1 is a plan view of the second embodiment of this invention, with one flap folded over;

FIG. 2 is a plan view of the embodiment of FIG. 1 in its partially enfolded condition; and

FIG. 3 is a plan view of the embodiment of FIG. 1 in use as a package for a plurality of two different types of articles.

#### DESCRIPTION OF THE DRAWINGS

Turning now to FIG. 1, the knock-down package 110 includes a central area 111 within which large articles, e.g., books, are adapted to be retained, a first flap 112 extending laterally from one imaginary marginal edge thereof, a second flap 113 extending laterally from a second imaginary marginal edge thereof, a third flap 114 extending laterally from a third imaginary marginal edge thereof, and a fourth flap 115 extending from a fourth imaginary marginal edge thereof. All the peripheral edges of flaps 112, 113, 114 and 115 are provided with stitched-down edges 116. Since the knock-down package is in the form of a sheet, it includes inside and outside faces. Thus, flap 112 is provided with an inside face 117 and an outside face 118, flap 113 is provided with an inside face 119 and an outside face 120; flap 114 is provided with inside face 121 and outside face 122; and flap 115 is provided with inside face 123 and outside face 124.

The flaps 112, 113, 114 and 115 are provided with co-operating securing couples for temporarily securing opposite flaps to one another, i.e., for temporarily coupling flaps 112 and 114 together and for temporarily coupling flaps 113 and 115 together. Preferably, the coupling means are Velcro couples, and, as shown, one-half of the Velcro couple 125 is secured to face 118 of flap 112, with the other half of the Velcro couple 126 being secured to face 121 of flap 114; one-half of the Velcro couple 127 is secured to face 119, and the other half of the Velcro couple 128 being secured to face 124 of flap 115.

Each of flaps 112, 113, 114, 115 is provided with article-receiving compartment means 132, 133, 134, 135 respectively. Thus, flap 112 is provided with compartment means 132 on face 117 whose limits are edge 136 and stitched-down edges 116; flap 113 is provided with compartment means 133 on face 119, whose limits are edge 137 and stitched-down edges 116; flap 114 is provided with compartment means 134 on face 121, whose limits are edge 138 and stitched-down edges 116; and flap 115 is provided with compartment means 134 whose limits are edge 139 and stitched-down edges 116. The means which holds Velcro couple 125 to flap 112 divides compartment 132 into a pair of pockets 140, 141. Similarly, the means which holds Velcro couple 126 to flap 114 divides compartment 134 into a pair of pockets 144, 145. Also, the means which holds Velcro couple 127 to flap 113 divides compartment 133 into a pair of pockets 142, 143. Similarly, the means which holds Velcro couple 128 to flap 115 divides compartment 135 into a pair of pockets 146, 147. Conventionally, the Velcro couple is held by stitching.

Turning now to FIGS. 2 and 3, it is seen that books 129 are stacked on the inside face of central area 111. Flap 112 is then folded over the books 129 so that face 118 and Velcro couple 125 are atop the books 129. Flap 114 is then folded over to rest on top of face 118 and, after being drawn over the books 129 as tightly as possible, Velcro couple 126 is temporarily, but firmly, secured to Velcro couple 125. It is seen that elongated articles have been placed in the article-receiving compartments. Thus, pencils 148 have been placed in com-

partment 135, and pens 149 have been placed in compartment 133.

As seen in FIG. 3, flap 115 is then folded over on top of coupled flaps 112 to 114 so that Velcro couple 128 is exposed. Finally, flap 113 is folded over flap 115 and, after being drawn over the books 129 as tightly as possible, Velcro couple 127 is temporarily, but firmly, secured to Velcro couple 128. Not only are the books 129 secured within the package, but the pens 149 and pencils 148 are also securely positioned in the package.

From the foregoing description, one skilled in the art can easily ascertain the essential characteristics of this invention, and without departing from the spirit and scope thereof, can make various changes and modifications of the invention to adapt it to various usages and conditions. Consequently, such changes and modifications are properly, equitably, and intended to be, within the full range of equivalence of the following claims.

I claim:

1. A flat envelope for carrying one or a plurality of individual articles of two different classes comprising: a sheet of lightweight, flexible, relatively tough, relatively strong material, said sheet including:

- a. a central, generally rectangular area free of apertures, and
- b. two pairs of mutually opposed flaps, each flap being one-piece with said central area and being of truncated triangular shape,
- c. each flap of said pair of mutually opposed flaps being provided with an interior integral article-receiving compartment on the inside face thereof,
- d. each flap of said pair of mutually opposed flaps being provided with co-operating, releasably interengageable means, said releasably interengageable means comprising a pair of interengageable surfaces in the form of a primary component and a secondary component, said surfaces being provided with a plurality of hooking elements, certain of the hooking elements comprising hooks and certain of the elements comprising loops, and characterized by the property that pressing opposed surfaces of the hooking elements together in face-to-face relation will result in hooks engaging loops to hold the surfaces together, said means being located at the truncated triangular apex, and satisfying the requirement that
- e. a primary component of the co-operating, releasably interengageable means is disposed on the outside face of one selected flap of a first pair of mutually opposed flaps, and a secondary component of the co-operating, releasably interengageable means is disposed on the inside face of the other flap of the first pair of mutually opposed flaps,

so that

A. one or a plurality of elongated articles may be placed within at least one of said interior article-receiving compartments, and

B. one or a plurality of distinct articles may be placed on the central area and be completely retained within the confines of the envelope by the steps of

1. folding one selected flap of a randomly selected pair of mutually opposed flaps over the article or articles and folding the other

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flap over the selected flap, thereby temporarily securing the other flap to the selected flap with the article or articles disposed between the flaps and the central area, and

2. folding one selected flap of the other pair of mutually opposed flaps over the randomly selected pair of temporarily secured flaps and folding the other flap over the selected flap, thereby temporarily securing the other flap to the selected flap, with the article or articles

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and the randomly selected, temporarily secured flaps between the other pair of temporarily secured flaps and the central area.

2. The envelope of claim 1 wherein said sheet is formed of rubberized fabric, waterproof canvas, polyolefin film or specially treated paper.

3. The envelope of claim 1 wherein said sheet is formed of a vinyl plastic.

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