

June 25, 1968

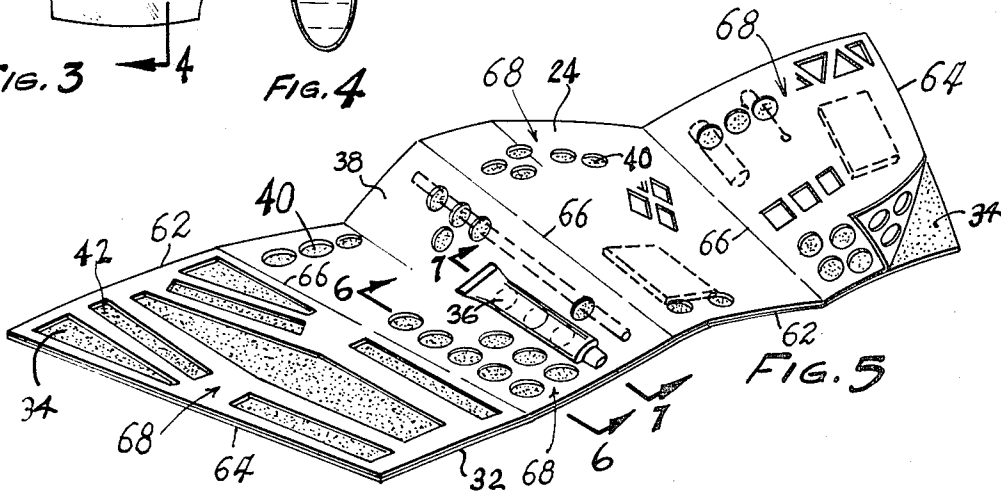
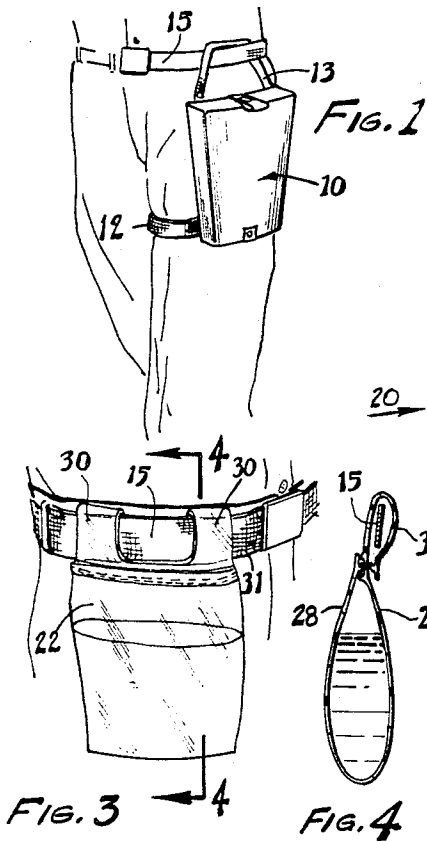
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3,389,784

PACKAGE KIT

Filed Oct. 20, 1967

2 Sheets-Sheet 1



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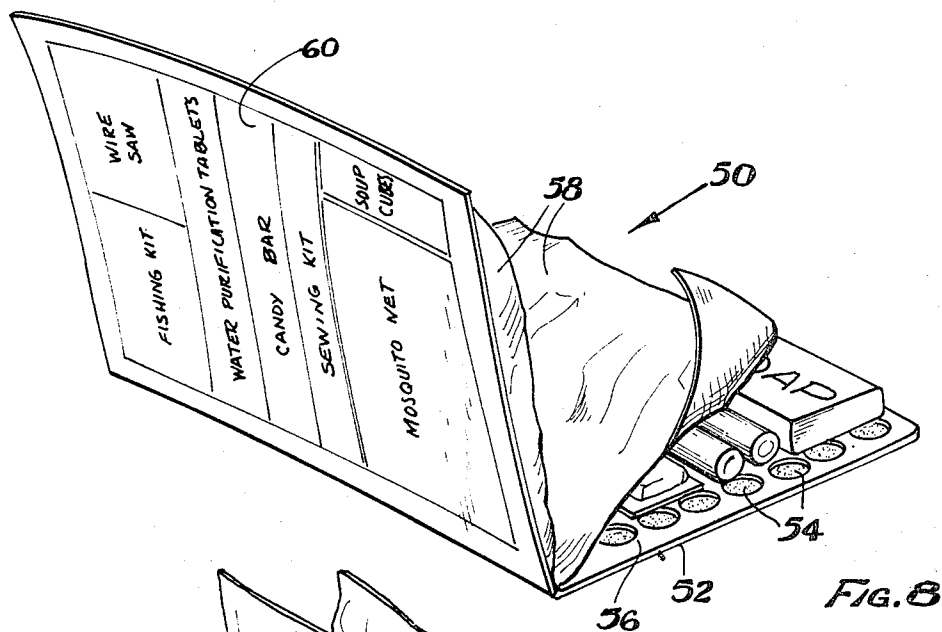


FIG. 8

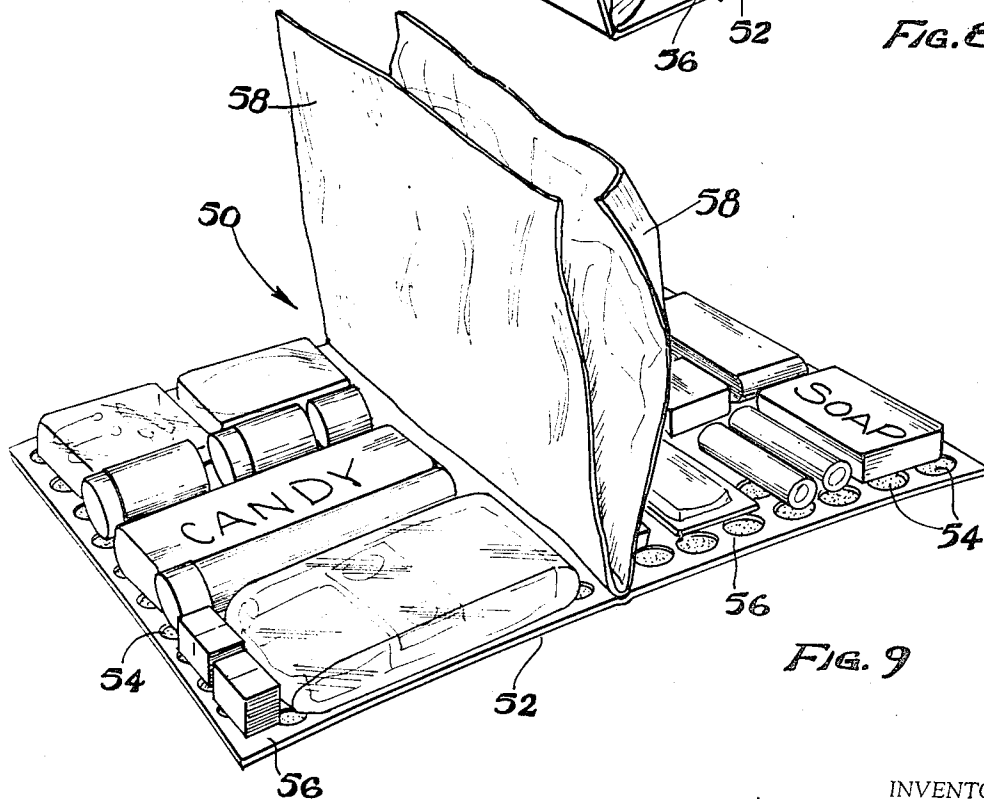


FIG. 9

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PACKAGE KIT

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Continuation of application Ser. No. 550,225, May 16, 1966. This application Oct. 20, 1967, Ser. No. 676,981
3 Claims. (Cl. 206—47)

ABSTRACT OF THE DISCLOSURE

A survival kit is described herein which constitutes a package of different items necessary for survival. The package is formed by a folded flexible web, and the items are mounted on the web by means of an adhesive coating. An apertured foam plastic pad is provided between the items and the adhesive coating so that the amount of adherence between the individual items and the adhesive coating can be controlled.

This application is a continuation of Ser. No. 550,225 filed May 16, 1966, now abandoned.

This invention relates in general to first aid and survival kits.

Domestic first aid kits, military survival kits, and packages of miscellaneous parts for other civilian and military purposes have been provided in box-like containers with and without the benefit of partitions and other means for keeping the contents of the kit separated in reasonable order. Some kits are simply provided in the form of a box full of miscellaneous loose items.

Kits of this type are generally used under stress conditions, whether civilian or military. It is usually the case that a particular item is desired among the multiplicity of items, and delay is both dangerous and annoying. Furthermore, particularly with survival kit equipment, many of the individual items are essential to comfort and the actual survival of the user. Hence, it is disastrous if one or more items is dropped from the kit and lost in the sea, or in dense earth cover growth, whether the loss is occasioned by lack of knowledge that it has fallen from the kit, or simply cannot be found after being dropped.

It is an object of this invention to provide a kit wherein the multiplicity of commodity packages are held adhesively bound to a base sheet in order to prevent their accidental separation from the kit.

It is a still further object of this invention to provide strong adhesive retention of such commodity packages, but to provide a controlled degree of adherence.

Again, noting the fact that survival kits are used under emergency conditions, it is unacceptable to have a particularly-desired item resist separation from the base sheet due to an over-tight retention by the adhesive layer. Under certain conditions, the adhesive material may bind more tightly to the item than is desired. Age will cause a firming of the adhesion and a separation becomes more difficult. Hence, the user is faced with frustration of delay and effort under trying conditions in order to separate the particular item from an adhesive sheet, if mere adhesion is employed without control.

Accordingly, it is a still further object of this invention to provide both a controlled adhesion and finger grip areas to facilitate the removal of the item from the backing sheet.

In accordance with these and other objects which will become apparent hereinafter, the best mode contemplated for the present invention is disclosed in the accompanying drawing wherein:

FIGURE 1 is an illustration of a survival kit as carried on the leg of an air crewman;

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FIGURE 2 is a view of the container open to reveal a package kit on the interior;

FIGURE 3 is an illustration of a secondary use for the package kit container;

FIGURE 4 is a section taken along line 4—4 of FIGURE 3;

FIGURE 5 is a plan view of the kit opened revealing the contents held adhesively to the surface thereof;

FIGURE 6 is a section taken along the line 6—6 of FIGURE 5; and

FIGURE 7 is a section taken through line 7—7 of FIGURE 5; and

FIGURES 8 and 9 are perspective views of a modified package kit.

Referring to the drawing, a kit 10 is shown strapped to the upper leg and belt 15 of an airman by means of a strap 12 and a strap 13 respectively.

In FIGURE 2, the kit 10 is shown composed of a pair of nested pan-shaped members 14 and 16, with a package kit 20 made according to the principle of this invention enclosed therein.

In packaging kits, whether for military or civilian use, a compact construction and maximum usefulness is essential to provide the smallest possible volume and weight. A water bottle is a desired item in a survival kit. In order that no extra room be used to hold a folded water bag, a container 22 is provided to hold the actual folded kit, indicated by reference number 24 in FIGURE 2. The container 22 is a plastic bag having side panels 26 and 28, removably joinable at the top by means of inner fitting flexible tongue and groove seal of conventional construction.

In order to provide maximum usefulness of the container 22, a belt loop 30 is secured on the back panel 26. This belt loop enables the bag to be filled with water and secured to the belt 31 of the airman substantially as shown in FIGURE 3.

The package kit 24 is preferably composed of a flexible web of woven or sheet material as indicated by the reference character 32 in FIGURE 5. The kit 24 has top and bottom marginal edges 62 and side marginal edges 64. A plurality of hinge axes 66 extend between the top and bottom edges 62. The axes 66 are disposed in substantially parallel relation to each other and the axes divide the kit into a plurality of panels 68 of substantially equal size and shape. The surface of the web 32 is coated with a strongly-adhering, pressure-sensitive layer 34. This web 32, with the pressure-sensitive material 34, will then serve as a base sheet upon which a multiplicity of items, such as a tube 36 as shown in FIGURE 5 may adhere. However, it has been found that after a period of time, particularly under conditions wherein the adhesive has been heated and cooled, the adhesion to the package may become overly strong, and the total area of the package is such that full adhesion to the entire surface will give a total resistance force to separation beyond that which a weakened man might care to exert, but in any event is annoying.

Accordingly, a cover layer of synthetic foam, indicated by reference character 38, is placed over the surface of the adhesive, but is perforated by a plurality of regularly-spaced openings 40 which expose a part of the adhesive material.

For heavy items, which cannot be supported by the small openings thus remaining, a portion of the foam 38 may be removed in larger blocks indicated by reference character 42 in FIGURE 5. A small pliers and blocks of survival cocoa are examples of such heavy items. The openings 40 and 42, however, are spaced from the hinge axes 66 so that portions of the adhesive layer 34 that are exposed through the openings 40 and 42 do not become stuck together at the hinge axis when the kit is folded as in FIGURE 2.

By this construction, a controlled amount of adhesion may be obtained in that the bulk of items to be handled in a survival or first aid kit may be sufficiently adhered in the number of openings 40 over which the item will bridge, such that they will be adhered firmly enough to the supporting base sheet 32 that they will not fall freely from the kit. Nevertheless, a reasonable amount of directly applied force will cause the separation. Furthermore, note that the tube 36 overlays an area of the foam pad 38, and, therefore, the fingers of the person using the kit may find a gripping place to begin the force to separate the desired item.

The FIGURE 7 illustrates the manner of compression of the resilient pad around the area of the openings 40 to allow this adhesion, with the non-adhering overhang.

The foam pad 38 serves the further function of cushioning the various items in order that they will not move against one another to the same degree that mere packaging in a group would cause damage.

The criterion of the correct amount of adhesive opening provided for a particular item to counteract the force of gravity is to consider the separation force which would take place if the base sheet 32 were folded into a compact package as shown in FIGURE 2, and then allowed to drop open as one end of the sheet is grasped. This action will produce some inertia induced force in each item, and it is essential that the amount of inertia force thus produced will not allow the item to fall free of the adhesive material and thus become lost.

The modified package kit shown in FIGURES 8 and 9 is indicated generally as 50. The latter kit may also be composed of a flexible web of a woven or sheet material as indicated by the reference character 52. The latter embodiment is composed of but two panels, adapted to be folded in the center.

As in the previous embodiment, the surface of the web 52 is coated with an adhesive pressure-sensitive layer 54. A cover of foam, or sponge rubber, 56, suitably apertured is placed over the adhesive layer 54.

Sheets of foil 58 are secured along the center line of the kit. They may serve as signalling reflectors, and may be formed into containers, utensils, and the like for the collecting and preparing of food and other sustenance materials. A chart 60 is placed on the outer face of each of the panels formed by the web 52. This chart provides an indication of the placement of each of the items in the kit and is most convenient in permitting the individual items to be rapidly located and removed.

The items on the individual panels may be sealed in a transparent plastic envelope for protection from deterioration. Also, accessible pockets may be provided on the panels to permit other items to be added, depending upon the localities in which the kits are to be used. Plastic seals

of the "zipper" type may be used to enclose the pockets and to permit access thereto whenever desired.

Whereas the present invention has been shown and described herein in what is conceived to be the best mode contemplated, it is recognized that departures may be made therefrom within the scope of the invention, which is, therefore, not to be limited to the details disclosed herein, but is to be afforded the full scope of the invention as hereinafter claimed.

We claim:

1. A survival package for protecting and storing articles comprising:

a web of flexible material having pairs of opposite marginal edges,

a coating of pressure sensitive adhesive on one surface of said web.

a cover layer superimposed on said web, said cover layer being a continuous sheet of resilient flexible material and having a plurality of openings therethrough which expose portions of said adhesive coating.

said web having a hinge axis extending between one of said pairs of marginal edges, said cover layer extending continuously along said hinge axis and said openings being spaced on opposite sides of said axis, and

a plurality of individual items secured on the surface of said cover layer by adhesion to said coating at said openings while bridging the openings and depressing and deforming the cover layer, whereby said web may be folded along said hinge axis with said items maintaining exposed portions of said coating separated and said cover layer acting as a cushion for said items.

2. A survival package according to claim 1 including a plurality of hinge axes in addition to said axis extending between said one pair of edges, said axes and said axis being disposed in substantially parallel relation across said web, whereby said web may be folded with the opposite surface of said web exposed on the outside of said package.

3. A survival package according to claim 2 wherein said hinge axes and said hinge axis divide said web into a plurality of panels of substantially equal size and shape.

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