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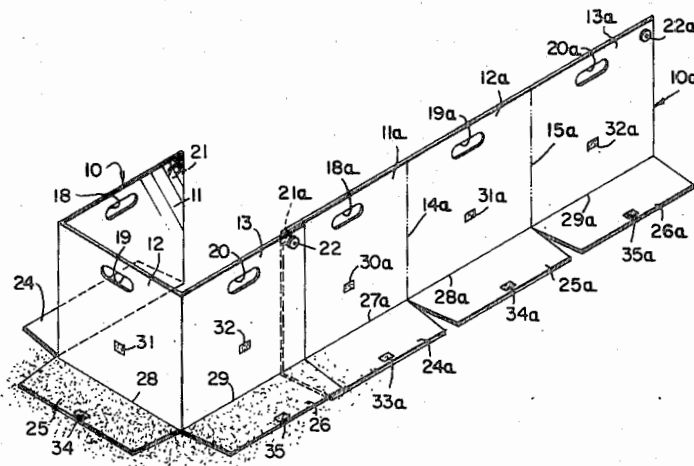
[54] **PROTECTIVE ENCLOSURE UNIT**
3 Claims, 3 Drawing Figs.

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135/5 R
 [51] Int. Cl..... **E04h 17/16**
 [50] Field of Search..... **256/25, 24,**
19; 135/5 R

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ABSTRACT: A series of substantially congruent generally rectangular panels hingedly connected together in end-to-end relation, and flaps on aligned sides of at least the endmost panels, the panels and flaps being swingable between a collapsed condition in facing relation with each other, and an erected condition with the panels in angular relation with respect to each other and upstanding from said aligned sides and flaps.



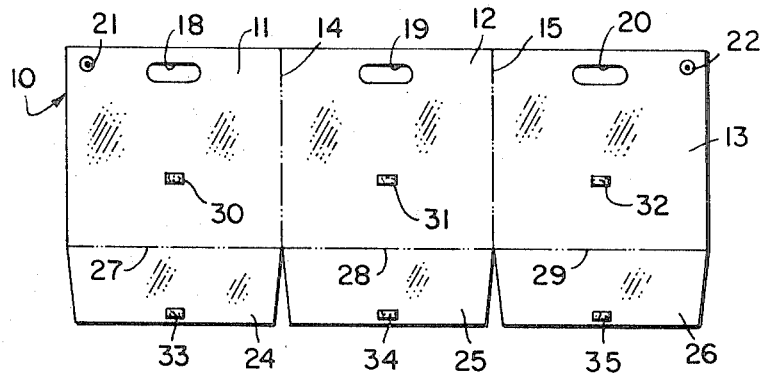


FIG. 1

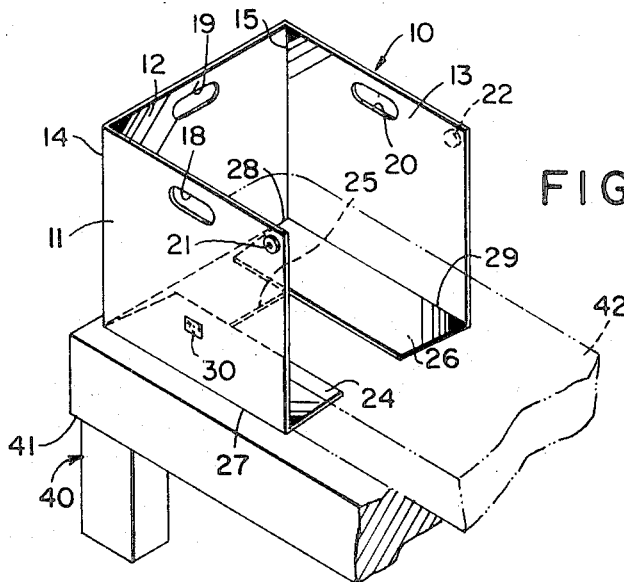


FIG. 2

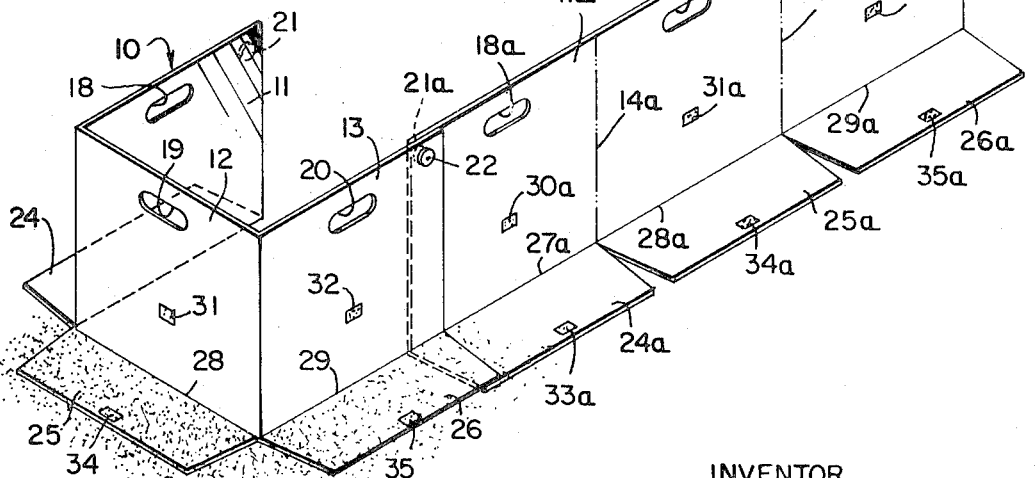


FIG. 3

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PROTECTIVE ENCLOSURE UNIT

BACKGROUND OF THE INVENTION

While there have, in the past, been provided collapsible enclosures for sunbathing, and the like, while affording a degree of privacy and protection from wind, et cetera, such as that disclosed in my prior U.S. Pat. No. 3,498,587, such devices have been relatively bulky and heavy for convenient portability, say by women and children, so that their usefulness has been somewhat limited.

SUMMARY OF THE INVENTION

Accordingly, it is an important object of the present invention to provide a collapsible protective enclosure unit which is extremely compact in its collapsed, nonuse condition of transit, and light in weight, for ready portability even by women and small children.

It is another object of the present invention to provide a protective enclosure unit of the type described which is highly effective as an enclosure for sunbathing, while affording privacy and protection from wind, and the like, and which is extremely versatile for use in conjunction with chairs, mattresses, chaise lounges, et cetera, and which may further be employed in conjunction with like enclosure units for increased size, as required, to enclose substantially any desired area or space.

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.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view showing a protective enclosure unit of the present invention in fully extended, coplanar or flat condition.

FIG. 2 is a perspective view illustrating the enclosure unit of FIG. 2 in an erected condition of use and, for purposes of illustration, in operative association with an article of furniture.

FIG. 3 is a perspective view illustrating a plurality of enclosure units of the present invention in operatively associated condition, as employed on a beach, or the like.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now more particularly to the drawings, and specifically to FIG. 1 thereof, a protective enclosure unit is there generally designated 10, and may include a series of three substantially congruent, generally rectangular panels 11, 12 and 13, arranged in aligned, end-to-end adjacent relation. In practice, it has been found advantageous to form the congruent panels 11, 12 and 13 each having a height of about 30 inches and a length (lateral extent as seen in the drawing) of about 26 inches. The aligned side-by-side or end-to-end panels 11, 12 and 13 are swingably connected together along their adjacent ends or edges by hinge means 14 and 15. While the panels 11, 12 and 13 may be separate and swingably connected together by any suitable hinge means, such as flexible tapes, it is advantageous that the panels be integrally formed, say of cardboard or other suitable stiff, bendable sheet material, and that the hinges 14 and 15 be defined by scores or creases provided in the integral cardboard material.

The series of panels 11, 12 and 13 have their lower sides or edges in alignment with each other; and, the upper sides or edges of the several panels are similarly in alignment with each other. The aligned lower sides or edges of the panels 11, 12 and 13 are generally parallel to the aligned upper sides or edges of the panels, and are generally perpendicular to the panel-connecting hinges 14 and 15, so that upon relative

swinging movement of the panels the lower panel sides or edges remain coplanar, and similarly the upper panel sides or edges remain coplanar upon relative panel-swinging movement.

Adjacent to each upper panel side or edge there is formed in the respective panel an elongate slot or through opening, as at 18, 19 and 20, for a purpose appearing presently. Additionally, each endmost panel 11 and 13, is provided adjacent to its distal or end edge, with a suitable detachable fastener element, as at 21 and 22, being provided respectively on the panels 11 and 13, also for a purpose appearing presently.

Extending from the lower sides or edges of the panels 11, 12 and 13 are respective, generally rectangular panels or flaps 24, 25 and 26, which are each preferably congruent to the other. The lower edge panels or flaps 24, 25 and 26 are each hingedly connected to the lower edge of the respective panel 11, 12 and 13, as by hinges 27, 28 and 29. While the flaps 24-26 may be separate from their respective adjacent panels 11-13 and hingedly connected thereto by any suitable hinge means 27-29, it has been found advantageous to fabricate the flaps integral with their respective adjacent hingedly connected panels, the hinge means 27-29 being preferably defined by folds, scores or creases formed in the cardboard or other material of the flaps and panels.

Thus, it will now be appreciated that the several panels 11-13 and their associated flaps 24-26 are all integrally fabricated, preferably of cardboard, or the like, and suitably hinged by creases or folds. Further, the integrally connected panels 11-13 and flaps 24-26 are preferably provided on one continuous face or side thereof with a reflective coating, as of aluminum foil, or the like, for reflecting solar rays in a manner appearing presently.

If desired, the panels 11, 12 and 13 may each be provided with a separable fastener element, as at 30, 31 and 32, adjacent to the respective creases 27, 28 and 29. Similarly, the flaps 24, 25 and 26 may each be provided with a separable fastener element 33, 34 and 35 also adjacent to respective folds or creases 27, 28 and 29. The separable fastener elements 30-35 are advantageously of Velcro, but may be other types of fastener means. Thus, the adjacent pair of fastener elements 30 and 33 may be a mating or complementary pair, as are the pairs 31, 34 and 32, 35. By means of the fastener elements 30-35, the flaps 24-26 are selectively releasably retained in facing engagement with their respective adjacent panels 11-13. Such retention may be desirable in various conditions of use and nonuse, say to minimize the maximum dimension required for storage in collapsed condition.

The above-mentioned fastener elements 21 and 22 may be of any suitable type, it having been found advantageous to employ male and female snaps, respectively, but Velcro or other fastener types may be satisfactory.

Upon relative swinging of the panels 11, 12 and 13 about their hinged connections 14 and 15 into congruent facing engagement with each other, as for collapsing to a storage position, it will be appreciated that the openings or slots 18, 19 and 20 are swung into alignment or registry with each other. In this condition, the registering openings 18, 19 and 20 permit the insertion therethrough of a person's hand for conveniently carrying the collapsed device.

A protective enclosure unit 10 of FIG. 1 is illustrated in an operative condition of use in FIG. 2, there being associated with a lounge 40, say of the type including a platform 41 having superposed thereon a mattress 42, shown in phantom.

The enclosure unit 10 is arranged with its panels 11, 12 and 13 swung relative to each other about their hinged connections 14 and 15 into generally right-angular relationship with each other, and arranged with the panels upstanding from the lower panel edges or hinges 29. Further, it will be seen that the panels 11, 12 and 13 are disposed to extend about one end region of the mattress or pad 42, one end panel 11 extending along one side of the pad, the medial or intermediate panel 12 extending along an end of the pad, and the other end panel 13 extending along the opposite side of the pad. In this manner,

an occupant resting on the pad 42 is surrounded on three sides by the panels 11-13 of unit 10.

Further, the flaps 24, 25 and 26 are swung about their hinged connections 27, 28 and 29 to extend inwardly from their respective panels 11, 12 and 13 beneath the mattress 42. That is, the mattress 42 rests on the flaps 24, 25 and 26 to firmly retain the flaps in position, and consequently securely maintain the panels 11-13 in their desired relationship about the pad 42.

In the embodiment of FIG. 3, the protective enclosure unit 10 is illustrated with its panels 11, 12 and 13 in an upstanding erected condition on a ground surface, say on a beach, with the flaps 24, 25 and 26 swung outwardly and suitably covered, say with sand for effective holding of the panels in position. An additional protective enclosure unit is generally designated 10a, and may be essentially identical to the unit 10, including a plurality of generally rectangular, substantially congruent panels 11, 12a and 13a, hingedly connected together, as by hinge means 14a and 15a for relative swinging movement of the panels, and including flaps 24a, 25a and 26a, respectively hingedly connected to the aligned lower edges of panels 11a, 12a and 13a, as by hinge means 27a, 28a and 29a.

In their associated operative relationship, the units 10 and 10a are disposed in upstanding condition on a ground surface, say on a beach, the latter unit having its panels generally coplanar, with its flaps extending outwardly on the beach and preferably covered with sand for stability. Further, one end region of panel 11a partially overlaps the adjacent end region of panel 13, and the fastener element 21a of panel 11a is detachably secured in fastened relation with respect to the fastener element 22 of panel 13. By this means, the unit 10a defines an effective protective enclosure extension of the unit 10, as to provide a greater area of protection, say from wind or invasion of privacy, or for reflection of sun.

Also, it will be appreciated that by the use of plural units of the instant invention, say the units 10 and 10a of FIG. 3, the wide versatility achieved by the device of applicant's U.S. Pat. No. 3,498,587 may be accomplished without the need for a relatively bulky and heavy single enclosure device. While the units 10 and 10a illustrated in FIG. 3 show one unit as a horizontal extension of the other, it is readily understood that one unit, say the unit 10a may be a vertical extension of the unit 10 as by interfitting engagement of the fastener elements

21, 22, 21a and 22a, if desired say to provide a protective enclosure of increased height.

Additionally, the protective enclosure unit of the instant invention, either by itself or in plural assembly, may be provided with a cover or top, say of flexible sheet material or fabric, say as protection from the sun. Any suitable top may be provided, say of flexible cloth, either by itself, or on a suitable framework, and the top may be detachably secured, if desired, to the fastener elements 21 and 22.

From the foregoing, it is seen that the present invention provides a protective enclosure unit which is extremely simple in structure, capable of economic manufacture by mass production techniques for sale at a reasonable price, and which otherwise fully accomplishes its intended objects.

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.

What is claimed is:

1. A protective enclosure unit comprising a series of three substantially congruent rectangular panels arranged in aligned end-to-end adjacent relation, a pair of hinges hingedly connecting together the adjacent ends of said panels for swinging movement between a collapsed position in facing engagement with each other and an erected position in right-angular relation with each other upstanding from one side edges thereof, said panels being opaque and having a reflective coating on at least one side, a flap hingedly connected to at least each endmost panel at said one side edge thereof and swingable between a collapsed position facing its adjacent panel and an erected position in right angular relation with its adjacent panel, detachable flap fastener means for detachably fastening said flaps in said collapsed position to minimize dimensions for convenient portability, and an opening in each of said panels located to register with each other when said panels are in said collapsed position to define a handhold.

2. A protective enclosure unit according to claim 1, in combination with detachable panel fastener means on the distal region of each endmost panel, for detachably securing together a pair of said units in end-to-end overlapping relation.

3. A protective enclosure unit according to claim 2, said panels and flaps being integrally fabricated of cardboard, and said hinges being defined by creases formed in said cardboard.

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