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COMBINATION PILLOW AND CRASH HELMET

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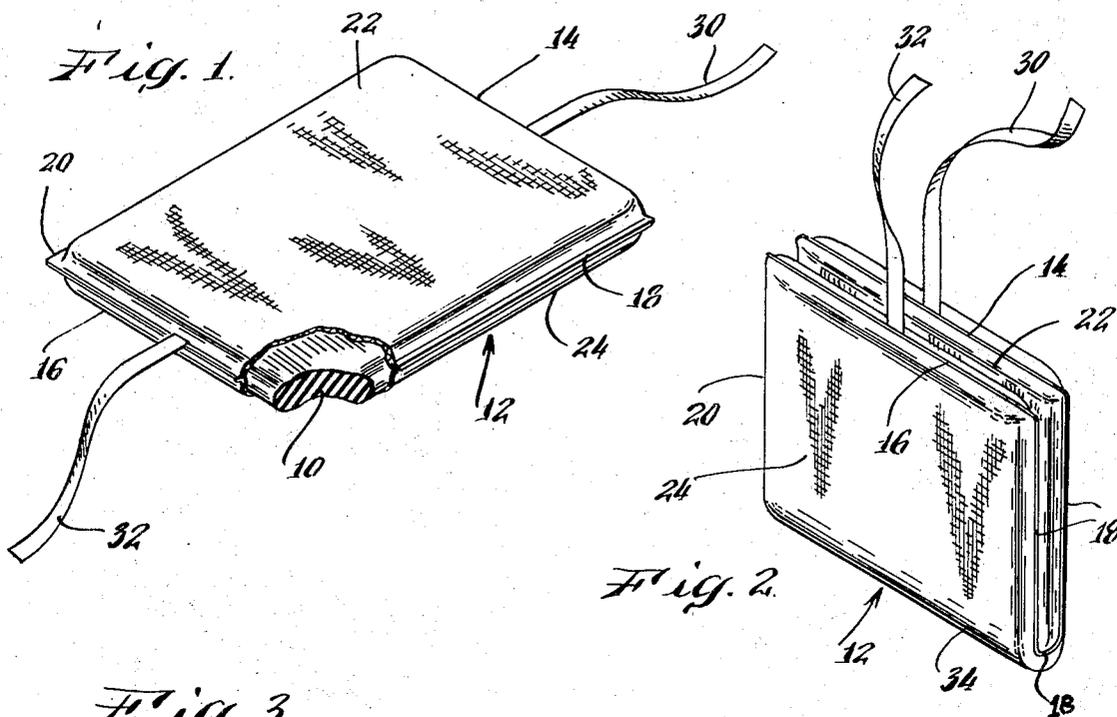


Fig. 3.

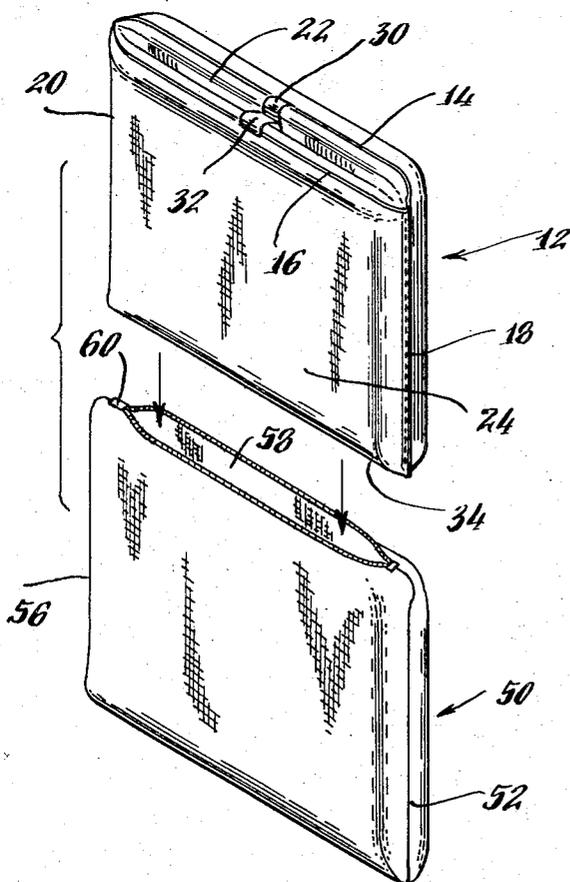
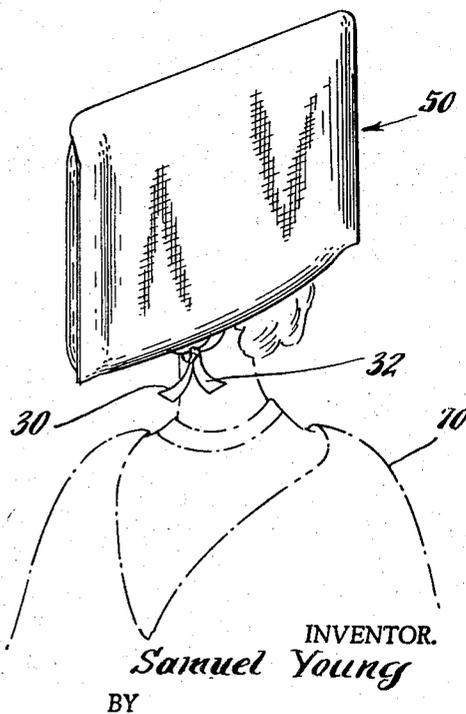


Fig. 4.



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COMBINATION PILLOW AND CRASH HELMET
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10 Claims

ABSTRACT OF THE DISCLOSURE

A pillow body is enclosed in a ticking, and a pair of tie strings are each attached at one end thereof to the ticking at opposite ends of the pillow body. The pillow body is folded in half along a transverse medial line, and the confronting side edges of the ticking are sewn together so as to form a pouch open on only one side. A pillowcase with a zipper closure surrounds the pouch. The device thus formed is useful as a courtesy pillow for the comfort of airline passengers, and doubles as a crash helmet which may be put over the head of the passenger when he is forewarned of an impending crash landing.

FIELD OF THE INVENTION

This invention relates to two ordinarily distinct areas; namely, pillows and crash helmets. More particularly, it concerns a dual-purpose device which serves either as a pillow or as a crash helmet as the need arises.

THE PRIOR ART

It is a conventional practice for common carrier vehicles such as buses, trains, and particularly airlines, to provide courtesy pillows for the convenience and comfort of those passengers who may wish to use them for sleeping or simply for resting more comfortably en route. There are also suggestions in the prior art that pillows can be doubled over and disposed within a zippered outer casing, and it has also been suggested that a structure of that kind has utility as a pouch within which various articles can be stowed.

Another need which arises in the field of transportation, particularly airline travel, is means by which passengers can protect themselves from injury in the event of an accidental collision. It is a conventional practice among the airlines, for example, to provide seat belts and to brief passengers as to how they may best protect themselves from injury in the event of a crash landing.

However, it appears that no one has ever suggested that the courtesy pillow which the airlines provide for their passengers' comfort might also be used to contribute to their safety when such a landing becomes imminent.

SUMMARY AND OBJECTS OF THE INVENTION

It is a general object of this invention to suggest a way in which the conventional courtesy pillows available on airliners may be redesigned so as to serve as a crash helmet which the passengers can put on at the time that he is warned of the possibility of a crash landing. In particular, the invention provides a pillow of the type which is folded over to form a receiving pouch, and chinstrap means are also provided at an appropriate place. The pouch can be put over the passenger's head to serve as a crash helmet, and the chinstrap engaged underneath his chin so as to retain the crash helmet in place despite the violent forces which would ordinarily be exerted upon the passenger in the event of a crash landing.

Accordingly, the invention contemplates a dual-purpose

device for use both as a pillow and a crash helmet. The device comprises a resilient body, a ticking surrounding the resilient body, and a pair of tie strings, one end of each tie string being attached to the ticking at respective opposite ends of the resilient body. The other end of each tie string is free to serve as a chin strap for retention of the crash helmet on the head of a wearer. The resilient body and its surrounding ticking are folded along a medial line to bring the opposite ends into juxtaposition, and the ticking is stitched along two pairs of confronting edges between the medial line and the juxtaposed opposite ends, thus forming a pouch. The pouch is closed along three edges, adjacent the medial line and the two lines of stitching, and is open along one edge adjacent the juxtaposed opposite ends of the resilient body. The pouch thus formed is sized and adapted to fit over a human head, so that the device serves as a crash helmet when needed. Upon being informed of the imminence of a crash landing, the passenger puts this pouch-like device over his head and ties the free ends of the strings together under his chin so that the crash helmet remains in position during the crash landing, despite the violent forces which are likely to be encountered on impact.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of the resilient pillow body surrounded by its ticking, and having a pair of tie string secured thereto. The ticking is shown broken away for purposes of illustration, to reveal the resilient pillow body therein.

FIG. 2 is a perspective view of the pillow and ticking of FIG. 1 folded in half to form an incipient pouch.

FIG. 3 illustrates the fully formed pouch with two lines of stitching closing the side edges thereof, and also shows the tie strings disposed within the pouch for storage. This figure further illustrates the pillowcase and the manner in which the pouch-like formation is inserted therein.

FIG. 4 shows the crash helmet of the invention being worn by a passenger, the strings being tied together under his chin to prevent the crash helmet from being torn off his head.

The same reference characters refer to the same elements throughout the several views of the drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

In order to manufacture a combined pillow and crash helmet device in accordance with this invention, one starts with an ordinary pillow body 10 of the conventional kind, which may be composed of any conventional pillow stuffing, such as feathers, fiber, latex or urethane foam, and the like. This resilient pillow body is conventionally surrounded by a cotton ticking 12. The pillow core thus formed is a generally rectangular body comprising opposite ends 14 and 16, opposite sides 18 and 20, and opposite faces 22 and 24.

As described so far, the device is nothing more than an ordinary pillow with its conventional ticking. However, in accordance with this invention, a pair of tie strings 30 and 32 are provided. One end of the tie string 30 is sewn to the ticking 12 at the end 14 of the pillow, while one end of the other tie string 32 is sewn to the ticking 12 at the opposite end 16 of the pillow. The other end of each of the tie strings 30 and 32 hangs free for subsequent use as a chinstrap for the crash helmet of this invention. Instead of two separate tieable strings, a single chinstrap of suitable length could be provided, and attached at either end to the same attachment points as the tie strings illustrated.

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As shown in FIG. 2, the pillow body 10 and its ticking 12 are folded over along an imaginary medial line 34 which runs transversely across the pillow body 10 substantially halfway between the opposite ends 14 and 16. Then, as seen in FIG. 3, the confronting edges of ticking 12 are sewn together along the confronting portions of side edges 18 and 20, to form a pouch which is closed on three sides. The three closed sides are the edges 18 and 20 where the ticking 12 is sewn together, and the medial line 34 along which the pillow body 10 and the ticking 12 were originally folded. The edge of the pouch defined by the opposite ends 14 and 16 folded into confronting relation, provides the only remaining open edge of the pouch thus formed.

The pouch opening, designated 40 in FIG. 3, is sized and shaped so as to receive a human head, thus enabling an airline passenger who expects a crash landing to put the pouch of FIG. 3 entirely over his head for protective purposes. The pouch opening 40 also forms a convenient receptacle for storage of the tie straps 30 and 32 when the device is being used for its alternate purpose as a courtesy pillow. In the view of FIG. 3, the free ends of the tie straps are shown inserted into the interior opening 40 of the pouch.

The pillow and crash helmet device thus formed is normally covered by an outer pillowcase 50 formed of a conventional cotton material. The pillowcase 50 is normally closed along three edges 52, 54, and 56, but has an opening 58 along the fourth edge which is large enough for the pouch-like pillow body 10 and its ticking 12 to be inserted into the opening 58. This also permits the pillow body to be removed from the pillowcase 50 when necessary, as for example to wash the pillowcase 50.

A conventional zipper type closure 60 is provided for closing the opening 58 after insertion of the pillow device, so that the latter is reliably retained within the pillowcase 50.

When used as a pillow, the combination of the pouch-like device of FIG. 3 with its surrounding pillowcase 50 provides a comfortable courtesy pillow which a passenger can use to facilitate sleeping or more comfortable resting en route, with all the conventional advantages of such pillows. In particular, the tie straps 30 and 32 are stored within the pouch opening 40 so that they do not interfere with the passenger's comfort.

When the passenger is informed of an impending crash landing, however, the device can then be very quickly and readily converted into a crash helmet which helps prevent head injuries to passengers. The conversion is readily effected by merely unzipping the closure device 60, which is ideally suited for rapid opening in emergency situations. Preferably, the pouchlike device comprising the pillow body 10 and its ticking 12 is then removed from the opening 58 of the pillowcase 50 and put in place over the passengers' head. However, if care is taken to insert the pouch-like device into the opening 58 of the pillowcase 50 in the particular position illustrated in FIG. 3, then when it is inserted the open edge of the pouch (defined by the opposite pillow ends 14 and 16) will be substantially congruent with the open edge of the pillowcase 50 (the edge which includes the opening 58). As a result, the pouch opening 40 and the pillowcase opening 58 will face in the same direction, permitting the pouch to be mounted over the passengers' head without first removing the pillowcase 50. This is a significant advantage in the event that the passenger must don the crash helmet quickly under emergency conditions.

In FIG. 4, the crash helmet device, with the pillowcase 50 thereover, is seen mounted over the head of a passenger 70 so as to cushion his head against violent impact, and help protect him from serious head injuries. Before he puts the crash helmet device of this invention in place over his head as illustrated in FIG. 4, the passenger 70 would remove the tie strings 30 and 32 from the pouch opening 40 and allow them to hang freely as he fits the

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crash helmet over his head. Then, he would tie the strings 30 and 32 under his chin to form a retaining strap. It will readily be appreciated that a crash landing is likely to involve rather violent impact, which can easily fling the crash helmet right off the head of a passenger at the very moment when it is most needed. The chin-strap 30, 32 is essential to assure the passenger that this will not happen.

It has been found that if the point of attachment of the chinstrap 30 and 32 to the opposite ends 14 and 16 of the pillow device is substantially midway between the side edges 18 and 20, the chinstraps will be in just about the right position for tying underneath the chin of a passenger, regardless of individual variations in the physical proportions of people who may be expected to use this device.

Accordingly, this invention results in a device which has all the convenience and advantages of the conventional courtesy pillow normally available on commercial aircraft, but in addition is readily and rapidly convertible to a much-needed and extremely important crash helmet for use in the event that a crash landing is impending.

Since the foregoing description and drawings are merely illustrative, the scope of protection of the invention has been more broadly stated in the following claims, and these should be liberally interpreted so as to obtain the benefit of all equivalents to which the invention is fairly entitled.

The invention claimed is:

1. A dual purpose device for use as a head-protecting padded crash helmet and as a head-supporting pillow, comprising:

- (a) a substantially rectangular resilient body with parallel elongated side each having a length S and parallel opposite ends each having a length E greater than one-half S;
- (b) a ticking envelope of textile fabric surrounding said resilient body;
- (c) two elongated ribbon-like strips forming chin strap means each having an anchoring end attached to said ticking at a point substantially midway along one of said opposite ends E of said resilient body;
- (d) said resilient body and surrounding ticking being folded along a transverse medial line M substantially perpendicular to a line drawn between said anchoring ends of said ribbon-like strips to bring said opposite ends E into juxtaposition and said ribbon-like strips into close proximity;
- (e) said ticking being stitched along two juxtaposed segments of its sides S between said medial line M and said juxtaposed opposite ends E whereby to form a substantially rectangular pouch closed along three edges, said medial fold line M and said two adjoining lines of stitching, and open along one edge between said juxtaposed opposite ends E;
- (f) said punch being sized and adapted to fit over a human head to serve as a crash helmet;
- (g) and said elongated ribbon-like strips being of sufficient length to secure the crash helmet-pillow in the protective position on knotting the closely proximate ribbon-like strips under the chin of the wearer.

2. A device as in claim 1, wherein:

said chinstrap means comprises a pair of tie strings, one end of each tie string being attached to said ticking and the other end thereof being free for tying to the free end of the other tie string under the chin of the wearer.

3. A device as in claim 1, wherein:

a portion of said chinstrap means, intermediate the points of attachment thereof to said ticking, is removeably disposed within said pouch.

4. A device as in claim 3, further comprising:

- (a) a pillowcase surrounding said crash helmet whereby it serves also as a pillow;
- (b) said pillowcase having an opening which is large

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enough to accommodate a human head and which extends along the longer edge of said pillowcase;

(c) and said pillowcase is arranged about said crash helmet with said pillowcase opening edge substantially congruent with said pouch opening edge to provide easy external access to the interior pouch cavity of said crash helmet and to said elongated ribbon-like strips;

(d) whereby said crash helmet-pillow with said pillowcase in place can be quickly donned and secured in the protective position embracing the user's head by engageably knotting the elongated ribbon-like strips under the user's chin.

5. A device as in claim 4, wherein:
said pillow case opening is large enough to permit said crash helmet to be inserted into and withdrawn from said pillow case therethrough.

6. A device as in claim 4 further comprising: readily openable closure means for said pillow case opening.

7. A method of protecting a human wearer against head injuries comprising the steps of:

(a) providing a crash helmet-pillow device in the form of a pouch closed on three sides and having an opening on one edge sized to completely enclose the head of and part of the neck of an adult human;

(b) securing an anchoring end of an elongated ribbon-like strip substantially midway along each edge of said opening;

(c) telescopingly lowering said pouch-like crash helmet-pillow over said human head;

(d) and engageably knotting said elongated ribbon-like strips under the wearer's chin to secure the crash helmet-pillow in protective head enclosing position.

8. A method as in claim 7, further comprising the steps of:
providing a pillowcase having an opening fitted with readily openable closure means;
inserting said pouch-like pillow device in said pillowcase;

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closing said closure means to enclose said pillow device completely;
and subsequently reopening said closure means to provide access to said pillow device prior to putting said pouch-like pillow device over said human head.

9. A method as in claim 8 wherein:
said pouch-like pillow device is inserted into said pillowcase in such a position that said pouch opening and said pillowcase opening face in the same direction;
whereby to avoid the necessity for removing said pillow device from said pillowcase before putting said device over said human head.

10 A method as in claim 7, wherein:
said strap means on the pillow device provided comprises a pair of tie strings attached to said pouch-like pillow device on opposite sides of said pouch opening thereof;
and said additional engaging step comprises the act of tying said strings under said chin.

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