# United States Patent

[11] **3,578,383**


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[45] Patented **May 11, 1971**


[54] **PILLOW UNIT FOR A SEAT**
**7 Claims, 9 Drawing Figs.**


[52] **U.S. Cl.** ..... **297/391,** 5/337
[51] **Int. Cl.** ..... **A47c 7/36,** A47c 7/42
[50] **Field of Search** ..... 297/391-—393, 397; 5/337, 341



[56] **References Cited**

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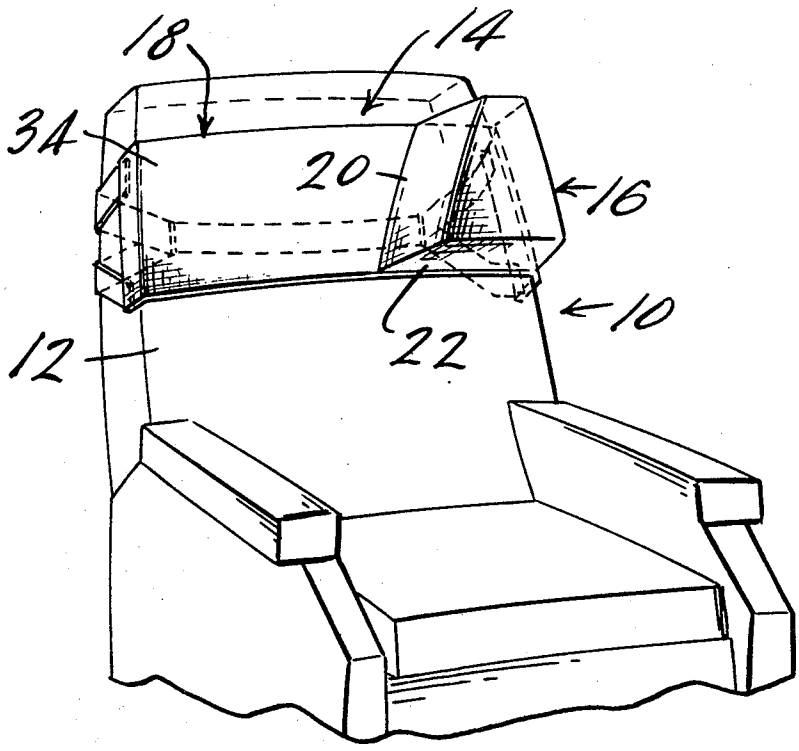
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**ABSTRACT:** A pillow unit for the head of a person in a chair or in a vehicle seat is attached to the back of the seat and supports the head when the person is in a relaxed, sitting position. The pillow unit includes a pillow extending outwardly from the seat back a sufficient distance and at a proper angle to adequately support the head, and means for affixing the pillow to the seat at the level of the head and to one side of the center of the seat back. In a preferred form, the pillow is affixed to a base sheet which, in turn, is attached to the seat back by elastic straps or by means of Velcro, by way of example. Also in a preferred form, the pillow includes a cover and a removable pillow insert which can be removed for the purpose of cleaning the cover and the base sheet. If desired, two of the pillows can be employed with the base sheet spaced apart a distance sufficient to receive the person's head to support either or both sides thereof.

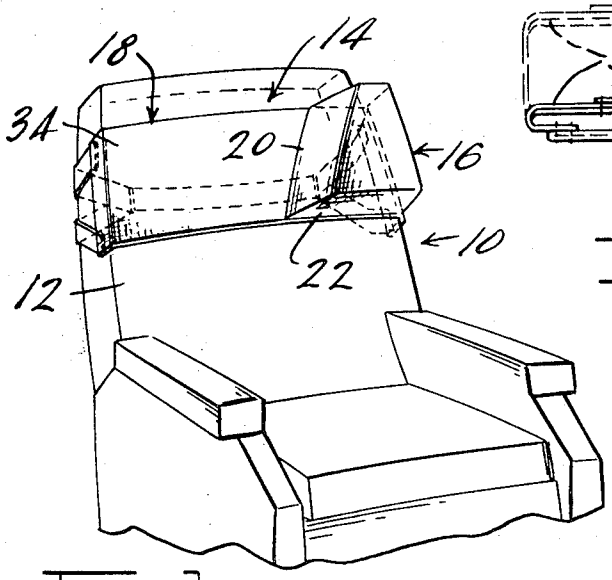



FIG-1-

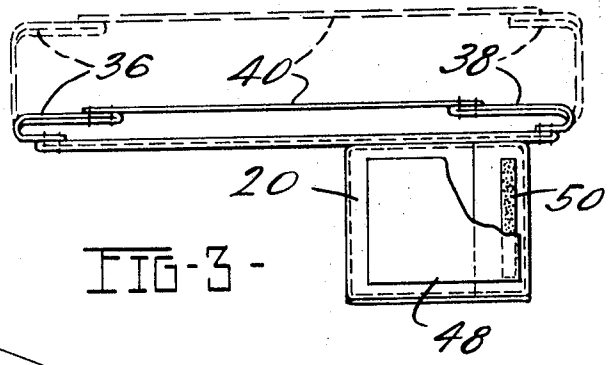



FIG-3-

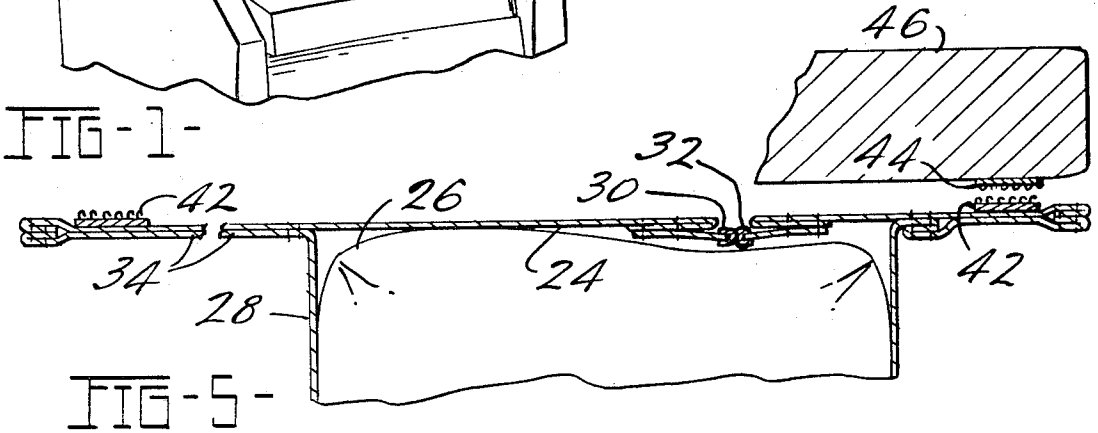



FIG-5-

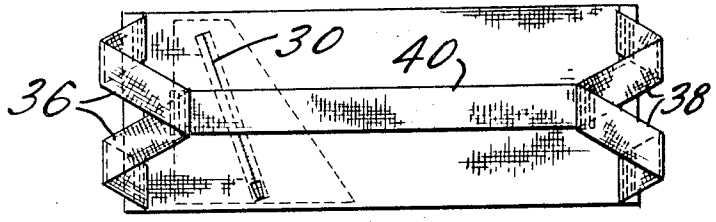



FIG-4-

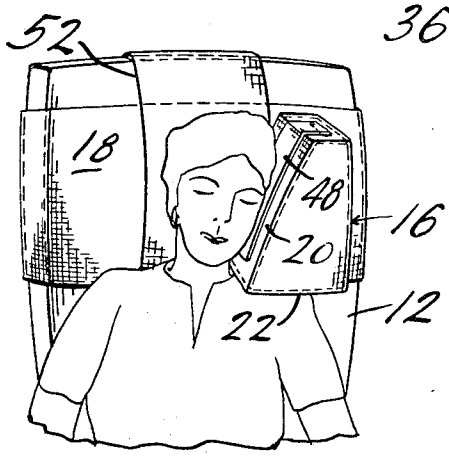



FIG-2-

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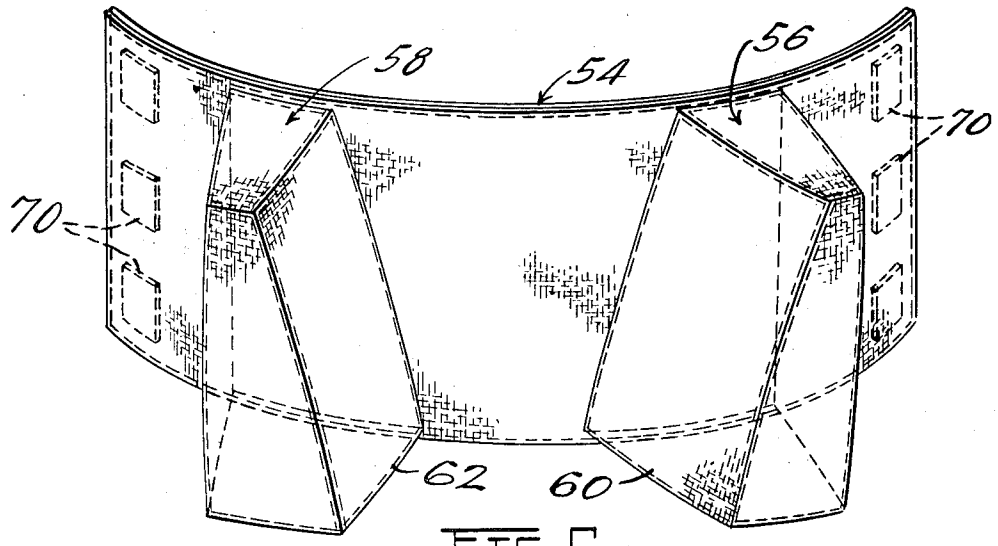



FIG-6-

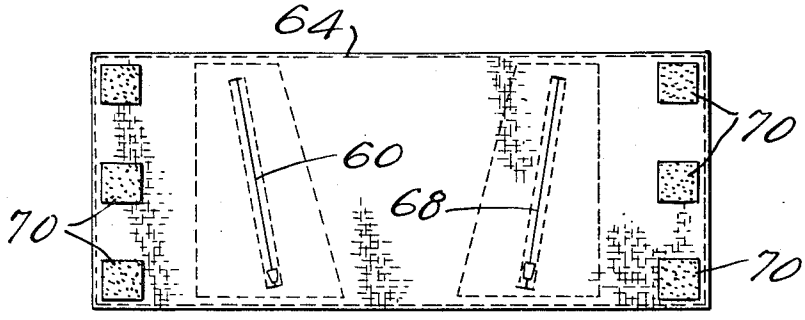



FIG-7-

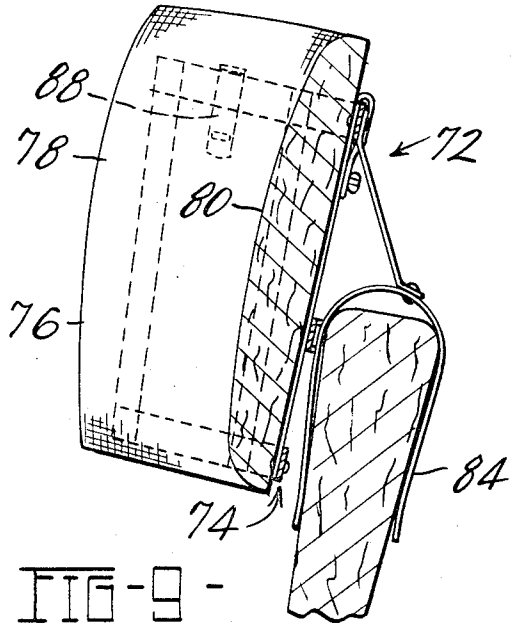



FIG-9-

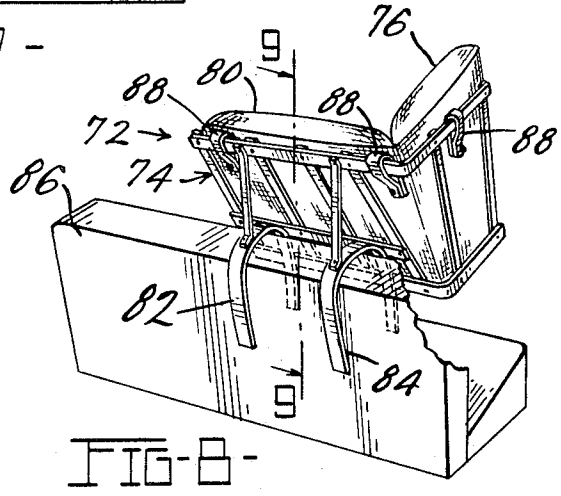



FIG-8-

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# PILLOW UNIT FOR A SEAT

This invention relates to a pillow unit for use with a seat or chairback and particularly to a pillow unit for use with a back of a passenger seat in a vehicle.

Passengers often desire to sleep, particularly during long trips, on vehicles such as automobiles, buses, trains and airplanes. While conventional small pillows are sometimes available for passengers on public conveyances, such pillows do not provide transverse support for one's head, thereby making sleep particularly difficult and especially so if the vehicle is moving.

The present invention provides a pillow unit which is removably attached to the back of the seat of the vehicle at the level of the passenger's head and provides transverse support for the head of the passenger when he is in a relaxed sitting position and is attempting to sleep.

The custom of sleeping in a chair while watching television is becoming more and more established. The pillow unit embodying the invention also facilitates this practice and at the same time minimizes stiff necks due to improperly supported heads.

The pillow unit according to the invention includes a pillow which preferably is of truncated triangular shape in a generally vertical cross section taken generally parallel to the seat back. This provides a supporting surface for the head located at an angle to more fully contact and support the side of the head and the cheek of the passenger and also forms a lower corner which fits comfortably between the shoulder and cheek, adjacent the neck. The pillow preferably is attached to a base sheet which provides a semirigid supporting base for the pillow when attached to the seat back. The attachment to the seat back can be by means of elastic straps or by hooked patches or strips affixed to the back of the pillow unit and mating with looped pile portions suitably stitched or otherwise affixed to the seat. Other means, such as adhesive strips, snaps, zippers or brackets can also be used to attach the pillow unit to the seat back.

In a preferred form, the pillow unit includes a cover with a removable pillow insert which can be removed when the cover and the base member or sheet, if used, are to be cleaned. The pillow unit also can employ two pillows which are spaced-apart a distance sufficient to accommodate the head of the person therebetween and provide transverse support for each side of the head.

It is, therefore, a principal object of the invention to provide a pillow unit for supporting the head of a person resting in a seat.

Another object of the invention is to provide a pillow unit which can be easily attached to and removed from the back of a chair or seat of a vehicle.

A further object of the invention is to provide a vehicle pillow unit for a passenger's head which more fully transversely supports the head.

Still another object of the invention is to provide a pillow unit having a removable pillow insert facilitating cleaning of the cover of the unit.

Many other objects and advantages of the invention will be apparent from the following detailed description of preferred embodiments thereof, reference being made to the accompanying drawings, in which:

FIG. 1 is a fragmentary view in perspective of a seat to which is attached a pillow unit according to the invention;

FIG. 2 is a fragmentary front view of a pillow unit with a modified seat back and showing a person in a resting position;

FIG. 3 is a plan view with parts broken away, of the pillow unit of FIGS. 1 and 2;

FIG. 4 is a rear view in elevation of the pillow unit of FIGS. 1 and 2;

FIG. 5 is an enlarged, fragmentary view in generally horizontal cross section of a slightly modified pillow unit;

FIG. 6 is a front view in perspective of a further modified pillow unit;

FIG. 7 is a rear view in elevation of the pillow unit of FIG. 6;

FIG. 8 is a rear view in perspective of a modified pillow unit; and



FIG. 9 is a view in vertical cross section, taken along line 9—9, of FIG. 8.

Referring to FIG. 1, a seat and specifically a chair **10** has a back **12** to which a pillow unit **14** embodying the invention is removably attached. The pillow unit **14** basically includes a pillow **16** and means **18** to attach the pillow to the back **12** in a substantially fixed and rigid position so as to be effectively support the head of one sitting in a chair, when relaxed.

The pillow **16** is positioned relative to the back **12** to one side of the center thereof and generally at the level of the head of the person in the seat. Preferably, the pillow is of a generally truncated, triangular shape as viewed in cross section taken in generally vertical plane which is generally to the back of the seat. The pillow thereby forms an angular head-supporting surface **20** and a lower flat surface **22** meeting at an acute angle so that the meeting edge can fit comfortably with the neck of the person, between the shoulder and the cheek, as particularly shown in FIG. **2**. The surface **20** extends outwardly generally perpendicularly to the seat back but can be at an angle of as small as 45° and still provide effective support for the head of the person. Preferably, this angle is from about 60° to 90°. The surface **20** also preferably is located at an angle to the vertical of from about 45° to about 75° to provide full and yet comfortable support for the head.

The area of the surface **20** is approximately the same as the area of the profile of an average person's head, the height of the surface **20** being from about 8 to about 12 inches, approximating the distance from the chin to the top of the head, and the width of the surface **20** being from about 4 to about 7 inches, approximating the distance from forehead to the occipital area of the head. A lesser area of the surface **20** provides a too concentrated and uncomfortable support while a larger area adds nothing to the effective support of the pillow and further tends to obstruct side vision of the person as well as increase the cost of the pillow and the storage space requirement, which is particularly important on public transportation.

The size of a base **24** (FIG. **5**) of the pillow **16** also is of importance to the extent that it must be sufficiently wide to provide rigid support for the pillow and the surface **20** with respect to the seat back. In this regard, the base against the seat back **12** should have an average width of at least equal to that of the surface **20**. The top, front, and side of the pillow opposite the surface **20** are not of critical size or shape and can be, of any suitable configuration. The overall pillow size, however, should be such that the surface **20** will be located to one side of the center of the back **12** of the seat and not extend appreciably beyond the edge of the seat, particularly for use in public transportation.

The pillow **16** preferably includes a removable pillow insert **26**, as shown in FIG. **5**, located within a cover **28** and removable through a slit opening **30** which can be closed by a zipper **32**, snaps, Velcro, or other suitable means. With the removable pillow insert **26**, the pillow unit can be more easily cleaned as is necessary from time to time.

The pillow **16** can be rigidly yet detachably affixed to the seat back **12** in a number of ways. As shown, the attaching means **18** includes a base member or sheet **34** to which the pillow **16** and specifically the cover **28** is affixed at all edges thereof so that the base sheet **34** will firmly support the pillow **16** when the base sheet is in turn attached to the seat back **12**. The base sheet **34** preferably has a height about equal to that of the pillow **16** and is of a width sufficient to extend to or near the edges of the seat back **12**.

The base sheet **34** can be attached to the seat back **12** in a number of ways. As shown in FIGS. **3** and **4**, in particular, the ends of the sheet **34** each have a pair of diagonal webs or straps **36** and **38** which join together and are connected by an elastic web or strap **40** which stretches approximately to the position shown in dotted lines in FIG. **3** to enable the straps and base sheet to be placed over the seat back **12** and firmly held in position, yet be easily removed.

A modified form of attachment is shown in FIG. **5**. Here, Velcro is used, with the hook or male portion **42** of the Velcro

being attached to the back of the base member 34 and with the looped pile or female portions 44 of the Velcro suitably affixed to a surface of a seat back 46. The looped pile strips 44 can be affixed to the side edges or to the front of the seat back 46, as is shown. In an automobile, for example, the looped pile portion 44 toward the driver's seat will be on the front of the seat back when a single seat back extends across the vehicle. This will be true also with any other seat backs which extend between the backs of two or more persons. The looped pile portions 44 can be stitched to the seat back, held by adhesive, or snapped on, by way of example. Further, snaps can be directly used between the base sheet 34 and the seat back 46 or zippers can be used, with one strip of the zipper attached to the base sheet 34 and the other attached to the seat back.

The use of the straps 36—40 or the Velcro portions 42 and 44 are preferred to snaps and zippers in most instances, however, because the former two means of attachment enable the pillow unit 14 to be infinitely adjustable over a vertical portion of the seat, whereas the snaps and zippers are more limited to a particular vertical position. Consequently, no adjustment can be made for people of different heights. A plurality of snaps can be used for limited vertical adjustment, however.

Particularly when the pillow unit 14 is to be used in public transportation, removable face sheet 48 for the surface 20 can be employed which can be easily removed for cleaning. The face sheet, as shown in FIG. 3, can be attached to the top of the pillow 16 by a Velcro strip 50. Also, when the pillow is used on many airplane or train seat backs, these already have a detachable head sheet or doily 52 thereon and this doily, as shown in FIG. 2 can be raised and placed over the base sheet 34 so that all surfaces contacted by the person's head are protected by removable and washable protective covers.

It will be understood that the base member 34 can be eliminated entirely with the straps 36—40 or other attaching means being affixed directly to the base portion 24 of the pillow 16. This is particularly true where the head doily 52 in employed, which can be placed over the straps 36—40 to substantially eliminate any discomfort such straps might otherwise impart to the person sitting in the seat.

In some instances, an example of which is when a seat and seat back are narrow, a two-pillow unit 54, as shown in FIG. 6 and 7, may be preferred to the single pillow unit 14. In the two-pillow unit 54, two individual pillows 56 and 58 are employed. These pillows have surfaces 60 and 62 which support the head either simultaneously or individually when the head is rolled slightly from side to side, depending upon the spacing of the pillows 56 and 58. The surfaces 60 and 62 can flare outwardly so that they form more acute angles with the seat back than is true of the surface 20 although the angles will preferably still be more than 45°. However, whereas the surface 20 is preferably positioned close to an angle of 90° with the seat back, the maximum angle for the surfaces 60 and 62 preferably is in the order of 75°. Otherwise, the pillows can be similar to the pillow 16.

A base member or sheet 64 in this instance has two back slits or openings 66 and 68 through which pillow inserts can be removed. Also, rather than continuous strips of hook portions of Velcro, several patches 70 can be used to reduce the overall material need. These in turn can be detachably connected to either patches or continuous vertical strips of the looped pile portion of the Velcro fastening material on the seat back.

Referring to FIGS. 8 and 9, a pillow unit 72 is designed particularly for use in automobiles or for other seats in which the back terminates at approximately the level of the shoulders. A base member 74 is rigid, in this instance, shown being made up of a plurality of metal straps, as shown in FIG. 8. A pillow 76 extends forwardly with an angular head-supporting surface 78 positioned similarly to the supporting surface 20 of the pillow 16. A flat, base pillow 80 is employed in this instance on the rigid base member 74 to cushion the head.

The base member 74 can be removably attached to the seat back and for this purpose has two inverted U-shaped brackets 82 and 84. In this instance, the brackets are simply placed over the top edge of a seat back 86 to hold the pillow unit in place adjacent the seat back, but with a portion extending thereabove. The pillows 76 and 80 can be attached to the base member 74 by any suitable means, such as snap straps 88. Rather than employing the U-shaped brackets 82 and 84, particularly with later model automobiles having built-in headrests, the pillow unit can employ a post extending downwardly and designed to fit into the track which otherwise carries the conventional headrest.

Numerous modifications of the above-described embodiments of the invention will be apparent to those skilled in the art, and it is to be understood that such modifications can be made without departing from the scope of the invention, the embodiments shown and described being primarily for purposes of illustration and not limitation.

I claim:

1. In combination, a seat having a back to support the back of a person, a pillow of a truncated triangular shape taken in vertical cross section, a base member affixed to said pillow for positioning said pillow to one side of the center of said seat back and generally at the level of the person's head, an elastic strap affixed to edge portions of said base member and extending around the back of said seat back and enabling vertical adjustment of said pillow relative to the seat back, said pillow being effective to support the head when the person is in a relaxed sitting position.

2. The combination according to claim 1 characterized by said pillow comprising a cover, a pillow insert, and means of the back of said base member to enable removal of said pillow insert.

3. The combination according to claim 1 characterized further by groups of small hooks affixed to the back of said base member in spaced positions, and groups of looped pile affixed to the seat back in spaced positions to further aid in attaching said base member to said seat back when said hooks engage said looped pile.

4. A pillow unit for use with the back of a seat to aid in supporting a person's head when in a relaxed sitting position, said pillow unit comprising a base member, a pillow affixed to said base member, said pillow being of a size sufficient to transversely support the head and providing a head-supporting surface extending outwardly from said base member a distance about equal to the distance from the forehead to the occipital area of an adult person, with the height of said surface approximately the distance from the chin to the top of the head, with the surface making an angle of from about 60° to 90° with the base member, and positioned at an angle to the vertical from about 45° to about 75°, and means connected to said base member for removably attaching said base member to the seat back to position said pillow in a supporting position relative to said seat back.

5. A pillow unit according to claim 4 characterized further by said pillow being of a truncated triangular shape taken through a generally vertical cross section.

6. A pillow unit according to claim 4 characterized by said attaching means being effective to enable vertical adjustment of said pillow and said base member over a portion of the seat back.

7. A pillow unit according to claim 4 characterized further by said pillow having a generally horizontally extending bottom surface forming an acute angle with said head-supporting surface.

# UNITED STATES PATENT OFFICE

# CERTIFICATE OF CORRECTION

Patent No. 3,578,383 Dated May 11, 1971

Inventor(s) Thad J. Earl

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 2, line 7, cancel "be"; line 13, after "in" insert -- a --; same line 13, after "generally", second occurrence, insert -- parallel --; line 43, cancel "of"; line 46, "be," should read -- be --. Column 3, line 24, before "removable" insert -- a --. Column 4, line 33, "of" should read -- on --.

Signed and sealed this 7th day of September 1971.

(SEAL)
Attest:

EDWARD M.FLETCHER,JR.
Attesting Officer

ROBERT GOTTSCHALK
Acting Commissioner of Patents

FORM PO-1050 (10-69)

USCOMM-DC 60376-P69
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