United States Patent

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| [31] | | 29,353/67 and 31,178/67 |

[54] BACK SUPPORTS 3 Claims, 3 Drawing Figs.

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|------|------------------------------|
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| | 219; 5/327 |
| [56] | References Cited |
| | LINITED STATES BATENITS |

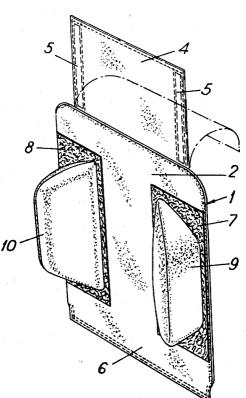
| UNITED STATES PATENTS | | | | | | |
|-----------------------|---------|--------|---------|--|--|--|
| 2,060,298 | 11/1936 | Gailey | 297/230 | | | |
| 2,081,111 | 5/1937 | Manley | 297/460 | | | |

[11] 3,542,421

| 2,10, 7 2,557,874 2,815,798 2,822,033 3,099,483 3,167,351 3,173,722 | 6/1951 12/1957 2/1958 7/1963 1/1965 | Foster Kailenta Lohans Dixon Hofberg Butler Carbonetti | 297/231 297/460 297/219X |
|---|---|--|--------------------------------|
| 3,173,722 | 3/1965 | Carbonetti | 297/427 |
| 3,279,849 | 10/1966 | Radke et al | 297/284 |
| 3,446,531 | 5/1969 | Froelich | 297/284 |

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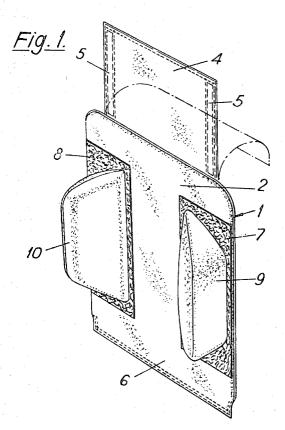
ABSTRACT: A back support comprising; carrier means adapted to be affixed to the back supporting face of a back rest of a seat or chair; a back supporting bolster; means for releasably interconnecting said bolster to said means to enable same to be placed in any one of a number of adjacent positions; such bolster forming, with the carrier means and the back rest, a cradle into which a portion of the back of a person may snugly lie.



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<u>Fig. 2.</u>

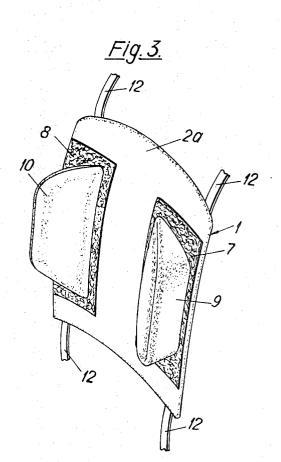
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BACK SUPPORTS

This invention concerns supports for supporting the backs of persons when seated in a seat or chair, and seats or chairs provided with such back supports. This invention has particular application in connection with vehicle seats.

It is well known, especially when travelling by, for example, motor car that fatigue is encountered due to lack of support to the back of the person travelling. Such fatigue is particularly noticeable when support is lacking in the vicinity of the lumbar region of the back.

One object of this invention is to provide a support for positioning on, or adjacent, the back rest of a seat or chair which provides sufficient support for at least the lumbar region of a seated person's back to minimize such fatigue.

According to this invention there is provided a back support 15 comprising carrier means adapted to be affixed to the back supporting face of a back rest of a seat or chair; a pair of back supporting bolsters; means for releasably interconnecting said bolsters to said means to enable same to be placed in any one of a number of adjacent positions; such bolsters forming, with 20 the carrier means and the back rest, a cradle into which a portion of the back of a person may snugly lie.

An intermediary member is provided to which said carrier means is secured and such intermediary member may be releasably secured to the seat.

The intermediary member would normally comprise a relatively thin sheet of material. Such material may either be flexible or alternatively it may be substantially rigid and may be preshaped substantially to conform with the contour of a portion of the back of a person for whom the support is designed.

Any means may be provided for releasably interconnecting said intermediary member and the seat such as, for example, a plurality of straps or alternatively at least one length of a malleable material which may be deformed and shaped to provide a hooklike extension which passes over the back rest of the seat.

According to one feature of the invention said means for releasably interconnecting the bolsters to the carrier means may comprise a hook-and-pile fabric fastening material of the 40 type manufactured and sold under the Trade Mark VELCRO.

Each such bolster carries a component of the VELCRO type material and these bolsters may be interlocked with a mating component of such VELCRO type material which is secured to said intermediary member so that the bolsters may 45 be releasably secured in any one of a large variety of back supporting positions so that the back rest may be used successively by more than one person.

In order that the invention may be more readily understood three embodiments of support in accordance with this inven- 50 tion will now be described by way of example, and with reference to, the accompanying drawings in which:

FIG. 1 is a perspective view of a preferred form of back support adapted to be releasably connected to the back rest of a motor car or like seat;

55 FIG. 2 is an enlarged fragmentary sectional view of a part of the support of FIG. 1; and

FIG. 3 is a perspective view similar to FIG. 1 of a second embodiment of support, this second embodiment of support having a rigid portion premoulded to conform substantially 60 with the shape of the back of a person for whom the support is designed.

Referring firstly to FIG. 1, the back support 1 comprises an intermediary member 2 comprising a pair of superposed padded flexible sheets formed of a material such as leather or 65 a plastics material such as plasticised polyvinylchloride. One or both of such sheets may be perforated to enhance comfort. The upper edge portion of this intermediary element carries a flap 4 also formed from a pair of superposed sheets of material sewn together about their periphery. Between these sheets 70 forming the flap 4 is located a pair of flat bars 5 formed from a malleable material such as mild steel or a metal alloy, so that when these bars are bent the flap provides a hooklike extension which may be placed over the top of the back rest of a seat so that the intermediary member 2 lies adjacent the back 75 justably to suspend the sheet member on the back rest.

supporting surface of a seat back rest. Sewn to a front face 6 of the intermediary member 2 are two rectangular pads 7, 8 of a material which forms one interlocking component of the fastening material manufactured and sold under the Trade Mark VELCRO, this material comprising two interlockable material components, the first component carrying a soft pile whilst the other component comprises a dense array of small barbed hooks.

A pair of bolsters 9, 10 are provided and each comprises a pad of resilient material which is encased by a sheet of flexible covering material such as leather or plasticised polyvinylchloride or any suitable plastics material. Such bolsters 9, 10 are shaped so that they have a generally triangulated cross section and with the intermediary member 2 form a cradle for at least the lumbar region of the back of a person using the support.

The back surface of each of these bolsters 9, 10 carries a sheet 11 of the VELCRO type material. Conveniently the bolsters 9, 10 carry the hooked component of the fastening material whilst the pads 7, 8 are formed of the soft pile component. The bolsters 9, 10 are thus releasably but firmly secured to the intermediary member 2. It will be understood that the bolsters 9, 10 may be placed in any one of a large number of different positions with respect to the intermediary member 2 so that the user of the support may select, after sitting, the position of the bolsters which is most comfortable.

In the second embodiment of FIG. 3 the back rest is very similar to the back rest of FIGS. 1 and 2 with the exception of the fact that the intermediary member 2 is not formed as a pair of flexible sheets of material but is formed by a preshaped substantially rigid sheet of material which may or may not be upholstered and padded. Such rigid member specifically designated 2a is moulded from, for example, glass fibre or a suitable flexible plastics material and carries a plurality of straps 12 by which it may be releasably, but firmly, connected to the back rest of a seat. The bolsters 9, 10 are adjustably secured to the rigid member 2a by means of the VELCRO type material in the same manner already described with reference to FIG. 1.

It will be understood that when it is desired to use the back supports of FIGS. 1 to 3 it is merely necessary to secure the intermediary member 2 to the back rest of the seat, to sit in the seat and to place the bolsters 9, 10 in the appropriate positions on the intermediary member for maximum comfort.

It should be appreciated that bolsters of varying sizes and shapes may be provided to ensure that a comfortable chair or seat is provided.

I claim:

1. A back support for attachment to the transverse top edge of a back rest of a seat comprising:

- 1. a sheet member having two lateral and two transverse edges:
- 2. means on the sheet member for releasably securing the sheet member to the transverse top edge of the back rest; said securing means extending from at least one of said transverse edges over the top edge of the back rest;
- 3. a pair of resilient bolsters releasably secured to the sheet member in positions selected so adjacent the lateral sheet member edges that the bolsters and the sheet member constitute a cradle to receive at least the lumbar portion of the back; and
- 4. carrier means releasably holding the bolsters on the sheet member,
 - a. the carrier means being constituted by a hook-and-pile fabric fastening material, one of the components of the fastening material being affixed to the sheet member and the mating fastening material component being affixed to the bolsters.

2. The back support of claim 1, wherein the means for releasably securing the sheet member to the back rest comprises at least one length of a malleable strip material bendable into hook shape to fit over the back rest and thus ad-

3. The back support of claim 1, wherein each bolster is of generally triangulated cross section, one of the surfaces of each bolster extending obliquely from the sheet member in the

direction of a respective one of the lateral sheet member edges to constitute said cradle.