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2,827,110

HEAD REST FOR AUTOMOBILES

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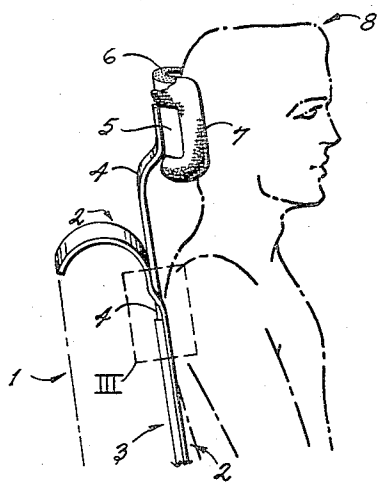


Fig. 1

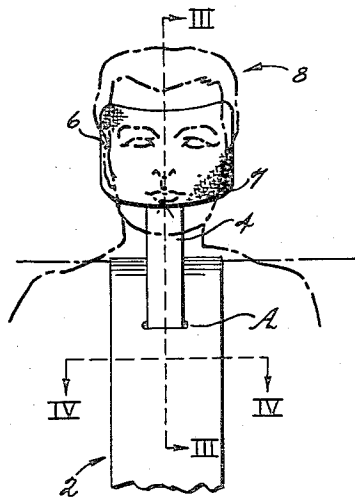


Fig. 2

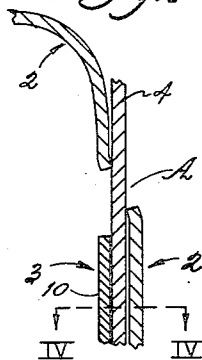


Fig. 3

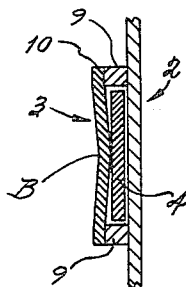


Fig. 4

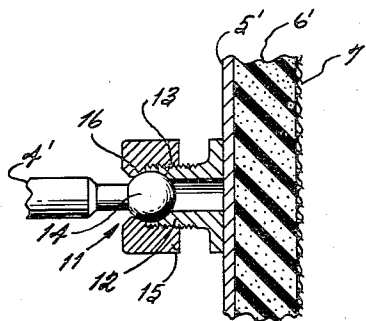


Fig. 5

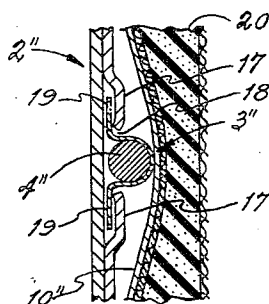


Fig. 6

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1

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HEAD REST FOR AUTOMOBILES

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2 Claims. (Cl. 155—174)

This invention relates to the head rest art, and more specifically, pertains to an improved head rest intended primarily for use in automobiles.

A head rest, in general, is designed to allow one to relax while sitting, and to rest the neck muscles.

A head rest designed to be an automobile accessory should, for the user's satisfaction, be easily mounted firmly in place on the seat and subsequently easily removed; be readily adjustable as to height or angle of the cushion, for comfort, yet firmly fixable in the desired position; be of such a shape as to comfortably receive the user's head and restrain it from lateral swaying; be inexpensive and simple of manufacture, yet sturdy and durable.

Instances of such head rests in the prior art, known to me, have been found to be insufficient in lateral stability, in ruggedness and in simplicity of construction, and to be too expensive.

The improvements embodied in the present invention are in the direction of increased ruggedness, simplicity, and ease of manufacture.

The present invention is a head rest attachment for automobile seats, comprising support means (broad enough for stability) removably hookably mountable on the back of a seat—that is, extending over a portion of the back and top of said seat; longitudinally virtually vertically positioned channel means effectively carried by said support means, or forming an integral part of said support means; connecting means longitudinally slidably but non-rotatably engageable with said channel means; head rest means (such as a curved lamina, or the like) cooperable to comfortably receive the head of the user, attachable (or attached) to said connecting means and (preferably, though not necessarily) bearing a head rest cushion. The expression "channel means" as used herein refers to any sheath structure of non-circular cross-section which is longitudinally essentially straight; the connecting means mates with said sheath or channel means and is restrained from lateral (or rotative) motion by it. In a preferred form of the present invention the channel means engages the connecting means with sufficient friction to hold it in any chosen position while in use.

From the above description of the basic and preferred generic forms of the present invention, it will be obvious to those skilled in the art that the present invention does indeed overcome the before-mentioned disadvantages of the prior art, being of a simple, effective, inexpensive construction.

With the above points in mind, it is an object of the present invention to provide firm, comfortable support for the head of a person sitting in an automobile seat, through a head rest removably hookably mountable on the seat.

It is a further object of the present invention to provide a head rest; for use in automobiles, of cheap but sturdy and durable construction.

It is also an object of the present invention to provide a head rest for use in automobiles which is continuously adjustable as to height.

Still another object of the present invention is to provide a head rest for use in automobiles in which the angle of the head engaging portion (usually the head rest cushion) is readily adjustable, fixable and lockable.

Other and allied objects of the present invention will be apparent to those skilled in the art after a careful perusal, examination and study of the accompanying drawings, the present specification, and the appended claims.

2

In order to aid comprehension of the present invention, reference is made to the attached drawings, in which:

Fig. 1 is a side perspective of one form of the present invention in use, with the back of the seat and a user indicated by the broken lines;

Fig. 2 is a front elevation of the head rest, seat, and user shown in Fig. 1;

Fig. 3 is a fragmentary detail sectional view of the area indicated by the rectangle III in Fig. 1, the section being taken along the line III—III indicated in Fig. 2;

Fig. 4 is a fragmentary sectional view of the head rest, the section lying in the plane determined by the lines IV—IV of Figs. 2 and 3;

Fig. 5 is a fragmentary partial sectional view of a modification in which the head rest means is attached to the connecting means through universal joint means, the section being taken through a plane normal to the head rest means; and

Fig. 6 illustrates, in fragmentary horizontal cross-section, a modified version of the region shown in Fig. 4.

On an automobile seat 1, in the usual form of the invention, is mounted the support means indicated generally at 2. In the specific form illustrated in Figs. 1, 2, 3 and 4, longitudinal channel means is provided in the form of a thin long channel 3, is attached to the back side of the support means 2 and serves as sheath for connecting means 4, which then passes through the aperture A in the support means. The connecting means 4 is, in the specific form of the invention illustrated in Figs. 1, 2, 3 and 4, firmly attached to curved head rest means 5, which bears a head rest cushion (made of foam rubber or similar material) indicated at 6. The cushion is customarily protected with a cover 7, and supports the back of the head of the user 8.

Figs. 3 and 4 illustrate the details of how the connecting means 4, usually a metal strap, is slidably retained in the channel 3—which has a boxlike structure, the sides being metal strips 9 firmly attached, by spot-welds or similar means, to the support means and to the back strip 10 (which is usually provided with a constriction B which act as a spring to resiliently, frictionally, hold the connecting means firmly but slidably)—and of how the connecting means then passes through the aperture A, which, in certain forms of the invention, may be slightly offset from the channel 3 to effectively frictionally lock the connecting means 4 in any selected position with respect to the support means 2 (or said connecting means 4 may be slightly curved to achieve the same end result).

Fig. 5 illustrates a slight modification of the form of the invention illustrated in Figs. 1, 2, 3 and 4. In this modification, similar parts will be indicated by similar reference numerals, primed however.

The modified version of the present invention illustrated in Fig. 5 includes universal joint means, indicated generally at 11, adapted to effectively attach the upper end of the connecting means 4' with respect to the head rest 5' in a manner whereby said universal joint means 11 may be selectively loosened to allow relative angular adjustment of the head rest means 5' with respect to the upper end of the connecting means 4' and whereby said universal joint means 11 may be selectively tightened to lock said head rest means 5' in any selected angular position with respect to the upper end of the connecting means 4', when desired.

In the specific example illustrated, the universal joint means 11 consists of a tubular hollow exteriorly threaded member 12 fixedly fastened to the rear side of the head rest means 5' and provided at its rear end with a semi-cylindrical seat 13 adapted to receive and engage a ball 14 fixedly carried by the end of the connecting means 4',

and to be retained in said seated position by an interiorly threaded nut 15 threadedly engaging the exteriorly threaded member 12, said nut 15 being provided with a central aperture 16 smaller in diameter than the ball 14 and thereby adapted to force the ball 14 against the seat 13 when the nut 15 is threadedly advanced with respect to the member 12 toward the right as viewed in Fig. 5. The arrangement is such that the universal joint 11 may be selectively locked or unlocked at will whereby to selectively orient the head rest 5' in virtually any desired angular relationship with respect to the connecting means 4' to provide a comfortable position for the head of a user of the device. The remainder of the device is generally similar to that hereinbefore-described. Therefore, further description of this modification is not thought necessary.

Fig. 6 is a view generally similar in aspect to Fig. 4 but illustrating a slightly modified form of the invention, and similar parts will be indicated by similar reference numerals, doubly primed however. In this modification the longitudinal channel 3'' is carried on the front side of the support means 2'', and is of non-rectangular configuration in horizontal cross-section. In this modification, said channel 3'' includes a curved forward wall 10'' fastened at its edges to the support means 2'', and also includes an intermediate wall 17 provided with a vertical slot 18. Said intermediate wall 17 being positioned between the front wall 10'' and the back wall of the support means 2''. In the modification illustrated in Fig. 6, the connecting means 4'' consists of a central rod-like member provided adjacent its bottom end with two laterally directed flanges or ears 19 adapted to be slidably engaged between the intermediate wall 17 and the rear wall of the support means 2'' with the central rod-shaped portion 4'' positioned in the vertical slot 18.

It should be noted that the modification illustrated in Fig. 6 may be provided with back rest cushion means 20 cooperable with the support means 2'' to lie in front of the front wall 10'' of the longitudinal channel 3'' to effectively compensate for the slight protuberance provided by said channel means.

Numerous modifications and variations of the present invention will occur to those skilled in the art after a careful study hereof. All such properly within the basic spirit and scope of the present invention are intended to be included and comprehended herein as fully as if specifically described, illustrated and claimed herein.

For example, the head rest and/or the back rest cushions and/or covers may be modified substantially and, in certain embodiments of the present invention, eliminated entirely.

Also, the means for frictionally locking the connecting means with respect to the support means in a selected relatively extended relationship can also be modified substantially from the specific forms described and illustrated herein.

The type of slidable but non-rotative cooperative relationship of the connecting means with respect to the channel means may be modified within the spirit of the present invention.

In those forms of the present invention employing universal joint means, substantial modification of the specific structures are within the scope of the present invention.

The exact compositions, configurations, constructions, relative positionings, and cooperative relationships of the various component parts of the present invention are not critical, and can be modified substantially within the spirit of the present invention.

The embodiments of the present invention specifically described and illustrated herein are exemplary only, and are not intended to limit the scope of the present invention, which is to be interpreted in the light of the prior art and the appended claims only, with due consideration for the doctrine of equivalents.

I claim:

1. In a head rest attachment for automobile seats, in combination: support means removably hookably mountable on the back of a seat; a head rest cushion; said support means being provided with channel means including a rectangular aperture at the top thereof and an elongated substantially vertically disposed channel of substantially rectangular cross-section on the rear side of said support means below and having its longitudinal axis angularly offset with respect to the plane of said rectangular aperture, said cross-sectionally substantially rectangular channel having a closed centrally forwardly projecting rear wall portion; elongated connecting means of rectangular cross-section longitudinally slidably and non-rotatably engaged within said substantially rectangular channel and said rectangular aperture in said support means, said cross-sectionally rectangular connecting means being restrained from lateral and rotational movement by said substantially rectangular channel and being frictionally engaged by said closed centrally forwardly projecting rear wall portion of said channel to cause said connecting means to be frictionally held, while in use, in any position to which it is longitudinally slidably adjusted; head rest means consisting of a lamina curved so as to comfortably receive the head of a user, said head rest means being attached to said connecting means adjacent the upper end thereof, said head rest means bearing said head rest cushion, whereby the user may comfortably and securely rest his head and neck by adjusting said head rest means as to height through the slidable cooperation of said connecting means and said substantially rectangular channel and said rectangular aperture.

2. In a head rest attachment for automobile seats, in combination: support means removably hookably mountable on the back of a seat; a head rest cushion; said support means being provided with channel means including a rectangular aperture at the top thereof and an elongated substantially vertically disposed channel of substantially rectangular cross-section on the rear side of said support means below and having its longitudinal axis angularly offset with respect to the plane of said rectangular aperture, said cross-sectionally substantially rectangular channel having a closed centrally forwardly projecting rear wall portion; elongated connecting means of rectangular cross-section longitudinally slidably and non-rotatably engaged within said substantially rectangular channel and said rectangular aperture in said support means, said connecting means being restrained from lateral and rotational movement by said substantially rectangular channel and being frictionally engaged by said closed centrally forwardly projecting rear wall portion of said channel to cause said connecting means to be frictionally held, while in use, in any position to which it is longitudinally slidably adjusted; head rest means consisting of a lamina curved so as to comfortably receive the head of a user and bearing said head rest cushion; universal joint means effectively attaching said head rest means to said connecting means adjacent the upper end thereof, said universal joint means being cooperable to be selectively tightened and locked in any chosen position, whereby the user may comfortably and securely rest his head and neck by adjusting said head rest means as to height through the slidable cooperation of said connecting means and said substantially rectangular channel and said rectangular aperture, and as to angular position by adjusting said universal joint means.

References Cited in the file of this patent

UNITED STATES PATENTS

380,251	Dillon	Mar. 27, 1888
996,717	Hoyer	July 4, 1911
1,597,355	Fussell	Aug. 24, 1926
2,180,768	Peterson	Nov. 21, 1939
2,492,383	Jones	Dec. 27, 1949