

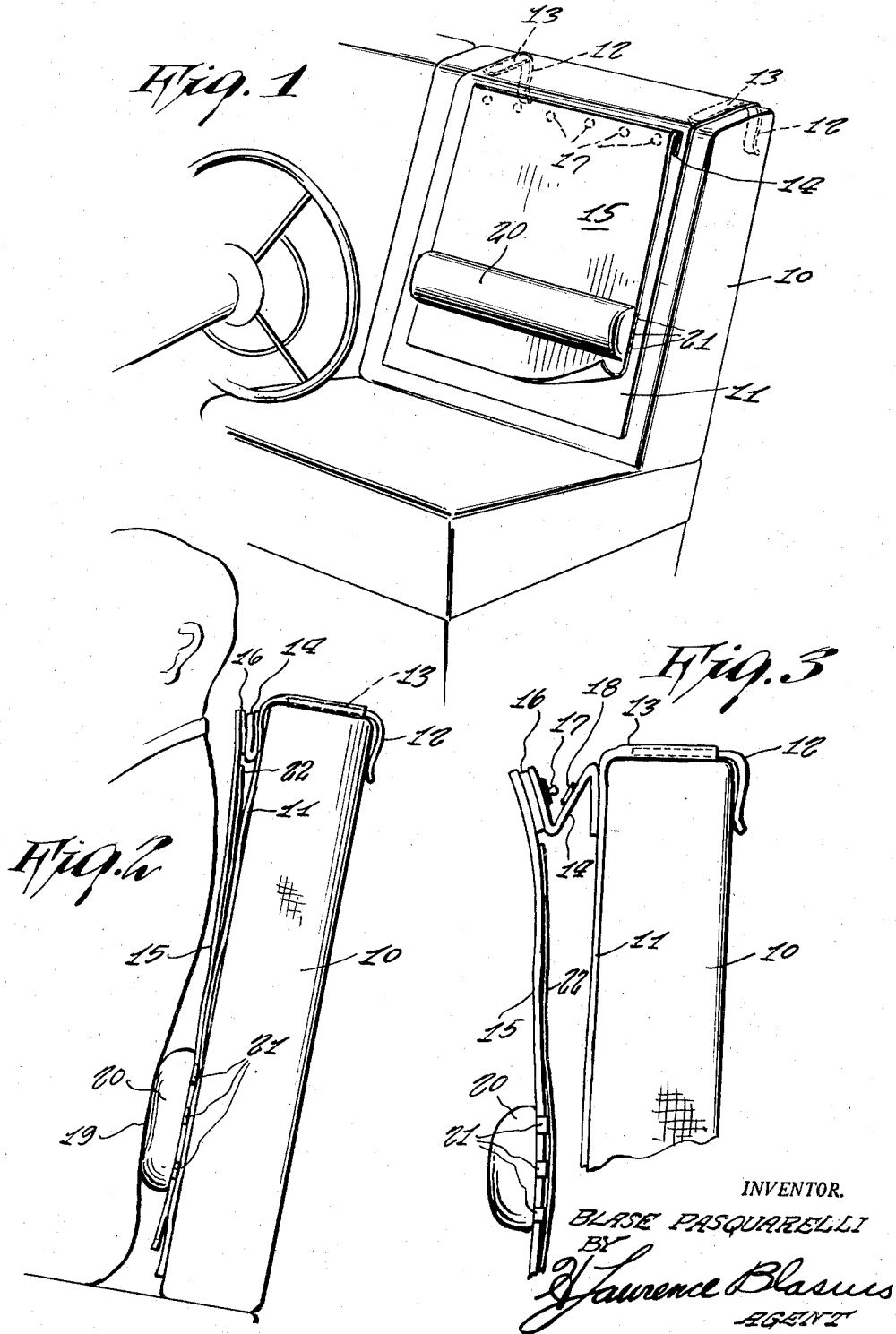
April 22, 1958

B. PASQUARELLI

2,831,533

BACK SUPPORT FOR AUTOMOBILES—BACK SAVER

Filed Dec. 14, 1955



1

2,831,533

BACK SUPPORT FOR AUTOMOBILES-BACK SAVER

Blase Pasquarelli, Bronx, N. Y.

Application December 14, 1955, Serial No. 553,035

7 Claims. (Cl. 155—182)

This invention relates to back supports for automobiles or the like.

The lower back, or rather the dorso-lumbar curve of the spine, is normally a forward curve of the spine. Forceful straightening of that curve may precipitate pain in the lower back as well as pains in the legs. Sitting for long periods of time in an automobile, with the car bouncing up and down, will cause strains of the back with straightening of the dorso-lumbar curve. Backache and tiredness will occur which may actually cause physical impairment.

It is accordingly a principal object of the present invention to provide a back support for vehicles or the like which will relieve the above-mentioned strain.

It is another object of the present invention to provide a back support of the above type wherein the vertical movement of the car seat in an up and down direction is partially or totally prevented from passing to the back of the motorist.

It is still another object of the present invention to provide a back support of the above type wherein the back supporting member is adjustable vertically to the convenience of the user.

It is still another object of the present invention to provide a back support of the above type which includes a freely movable section which rides over a second section mounted upon the car seat which prevents the back of the motorist from absorbing the usual up and down friction of the seat and wherein a back rest supporting the dorsal-lumbar curve of the spine from over-extension is incorporated on the aforesaid freely movable member, said back support being adjustable to the particular individual using the support.

Other objects of the invention are to provide a back support bearing the above objects in mind which is of simple construction, has a minimum number of parts, is inexpensive to manufacture and efficient in use.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which:

Figure 1 is a perspective view of a preferred embodiment of the present invention shown in operative use;

Fig. 2 is a side elevational view thereof and shown supporting the motorist with the upper end of the freely movable member released from the inner member and with the back rest in operative position supporting the dorso-lumbar curve of the spine from over-extension; and

Fig. 3 is an enlarged detail of Fig. 2, showing the manner in which the freely movable member glides over the inner member to maintain the back of the motorist free from the usual up and down friction of the back of the seat and illustrating the manner in which the back support is slidably mounted on the freely movable member.

Referring now more in detail to the drawing, 10 indicates the usual back supporting portion of a vehicle or automobile seat, substantially as illustrated.

2

In the practice of my invention, novel means are provided for supporting the dorso-lumbar curve of the spine and from preventing the up and down friction of the seat 10 from being transmitted to the back of the motorist and include a first rectangular sheet 11 of strong, smooth faced, preferably pliable material, for example plastic, leather or other material having similar physical properties. The stationary sheet 11 extends across the front face of the seat 10 and across the upper edge thereof, being mounted thereat by means of a pair of laterally spaced, flat metal clips 12 mounted into the upper edge of the sheet 11, as at 13, whereby to mount the sheet 11 in the position shown, while at the same time permitting its easy and ready removal therefrom.

A flexible supporting member 14 of Z-shaped cross section (Fig. 3) is suitably secured at one end to the upper front face of the sheet 11, for example by means of heat sealing or other suitable means. The other end of the support 14 is secured to the upper inner face of a second freely movable sheet 15 of the same material as sheet 11, for example by means of heat sealing, a reinforcement or spacer strip 16 being provided intermediate the sheet 15 and accordian-like support 14. A plurality of laterally spaced male snap fastening elements 17 are mounted on the inner face of the front portion of the accordian shaped support 14 and cooperate with a corresponding plurality of laterally spaced female snap fastening elements 18 to retain the movable member 15 in fixed position on the stationary member 11 when not in use, as shown in Fig. 1. In this position the lower edge of the sheet 15 will terminate short of the lower edge of the sheet 11. However, when the snap fastening elements 17 are released from the snap fastening elements 18, the freely movable member 15 will be suspended, as shown in Fig. 3, by means of the accordian-like member 14 to prevent the up and down movement of the seat 10 from being transmitted to the sheet 15, as will be obvious. Thus, when the clips 17, 18 are out of engagement with each other, the support 14 will serve as a shock absorber between the sheet 11 and the sheet 15 whereby to prevent the up and down movement of the seat 10 from being transmitted to the back of the motorist.

In order to support the curve of the spine, namely the dorso-lumbar curve 19 (Fig. 2), a sponge rubber back support or cushion 20 is positioned across the front face of the sheet 15 extending from edge to edge near the lower end thereof by means of the locking or clipping catches 21 suitably secured to the opposite ends thereof and adapted to resiliently engage the opposite vertical edges of the sheet 15, whereby to permit its slidable adjustment vertically, while at the same time retaining itself in the adjusted position.

Of course, any other suitable means than the male snap fastening elements 17 and female snap fastening elements 18 may be employed for holding the upper end of the sheet 15 on the upper end of the sheet 11 when the device is not in use without departing from the spirit and scope of the invention. The ends of the accordian-like support 14 may be secured to the sheets 11 and 15 by sutures or other suitable fastening means. Also, the flat hooks 12 for securing the device on the seat 10 may be formed integral with the sheet 11.

It will be seen that the back support 20 is adjustable on the sheet 15 to the convenience and particular requirements of the individual user. The lock clips 21 are of U-shaped cross section and are adapted to resiliently engage the opposite edges of the sheet 15. When the clips or snap fastening elements 17 are opened, the lower edge of the sheet 15 will extend downwardly several inches below the lower edge of the stationary sheet 11.

When in non-use position, the folded accordian-type support 14 is kept tight and unmovable by the snap fas-

tening elements 17, 18. When ready for use, the snap fastening elements are disengaged to allow the two members 15 and 11 to glide freely one over the other. Thus, in an automobile, the movement of the back of the seat 10 of the car is accepted by the first member 11 of the device, and it is not necessarily transmitted to the forward or second part 15. This is especially so, if a small amount of dry dusting powder is sprinkled between the sheets occasionally. The back support 20 may be of foam rubber, or cushioning, or other suitable material. It may be attached in many ways to the front surface of the second member 15 although the clipping catches 21 are preferred. The cushion 20 is adjustable to the curvature of the spine 19 by sliding it up or down.

It will now be apparent that there has been provided a device for supporting the dorso-lumbar curve of the spine so as to prevent the same from straightening out and to prevent the precipitation of pain in the lower back and pains in the legs. The accordian-like support 14 will also prevent the up and down vibration of the seat 10 from being transmitted to the sheet 15 and thus to the back of the motorist to further eliminate strains of the back and to eliminate backache and tiredness which may actually cause physical impairment. This is particularly true when sitting for long periods of time in an automobile or other vehicle, for example buses and airplanes.

Although the device has been shown in operative use in the driver's seat, it will be readily apparent that it is also adapted to be used in any other seat of the vehicle. Thus, over-extension of the dorso-lumbar curve of the spine is prevented.

Other methods of holding the cushion 20 firmly attached to the sheet 15 may, of course, be employed. However, with the clipping catches 21, it is unnecessary to perforate the sheet 15 and thus weaken it. The edges of the sheet 15 may be reinforced with the semi-rigid strips 22 (Fig. 3). The ends of the strips 22 will be suitably secured to the inner face of the sheet 15 to slidably abut the clipping catches 21 and to limit the upward and downward extreme displacement thereof.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

Having thus set forth and disclosed the nature of my invention, what is claimed is:

1. A back support for seats of vehicles or the like comprising a first pliable member adapted to be positioned across the front of the seat back, means for mounting the upper edge of said member across the top of the seat back, a second pliable sheet adapted for vertical gliding movement over said first member, and means for mounting the upper end of said second sheet across the upper edge of said first member adapted to permit the gliding movement therebetween, locking means for fixing the upper end of said sheet to said member, whereby to permit the gliding movement of said sheet relative to said member when said locking means are released and to

prevent the up and down movement of the seat from being transmitted to said sheet, cushion means adapted to support the dorso-lumbar curve of the spine positioned on the front of said sheet and means at the opposite ends of said cushion means for adjustably positioning the same on said sheet whereby to prevent over-extension of the dorso-lumbar curve and attendant backaches and leg pains.

2. A back support according to claim 1, said means for mounting the upper end of said second sheet across the upper edge of said first member comprising a flexible accordian-shaped member of substantially Z-shaped cross section having its inner downwardly extending ends secured to the top of said member on the outer face thereof, and the upwardly extending end thereof secured to the top of said sheet on the inner face thereof.

3. A back support according to claim 2, said locking means comprising a pair of laterally spaced first snap fastening elements secured to the front end of said accordian-like member on the inner face thereof, and a complementary plurality of snap fastening elements secured to the central portion of said accordian-like member on the outer face thereof and adapted to receive there-within said first snap fastening elements whereby to affix the sheet on said member when not in use.

4. A back support according to claim 3, said cushion means comprising a pad having a convex front surface adapted to support the dorso-lumbar curve of the spine, said pad being formed of resilient material.

5. A back support according to claim 4, said means at the opposite ends of said pad comprising a plurality of vertically spaced spring clips of U-shaped cross section adapted to resiliently engage the opposite edges of said sheet whereby to permit the vertical sliding movement thereon and to maintain the adjusted position thereof.

6. A back support according to claim 5, said means for supporting the upper end of said member comprising the upper end of said member being folded laterally across the top of the sheet and a plurality of laterally spaced, flat metal hook members molded in the upper end of said member and adapted to engage the back of the seat with the extended free end portions thereof.

7. A back support according to claim 6, including semi-rigid strips secured at their opposite ends to the inner faces of said sheet at the opposite edges thereof adapted to slidably abut said spring clips and to limit the extreme positions thereof.

References Cited in the file of this patent

UNITED STATES PATENTS

1,444,536	Boyce	Feb. 6, 1923
2,060,298	Gailey	Nov. 10, 1936
2,307,331	Parker	Jan. 5, 1943
2,756,808	Eichorst	July 31, 1956

FOREIGN PATENTS

533,992	Great Britain	Feb. 25, 1941
---------	---------------	---------------