Oct. 28, 1947. F. P. BLANCHARD ET AL 2,429,795

FOLDABLE BACK REST

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Fig. 1

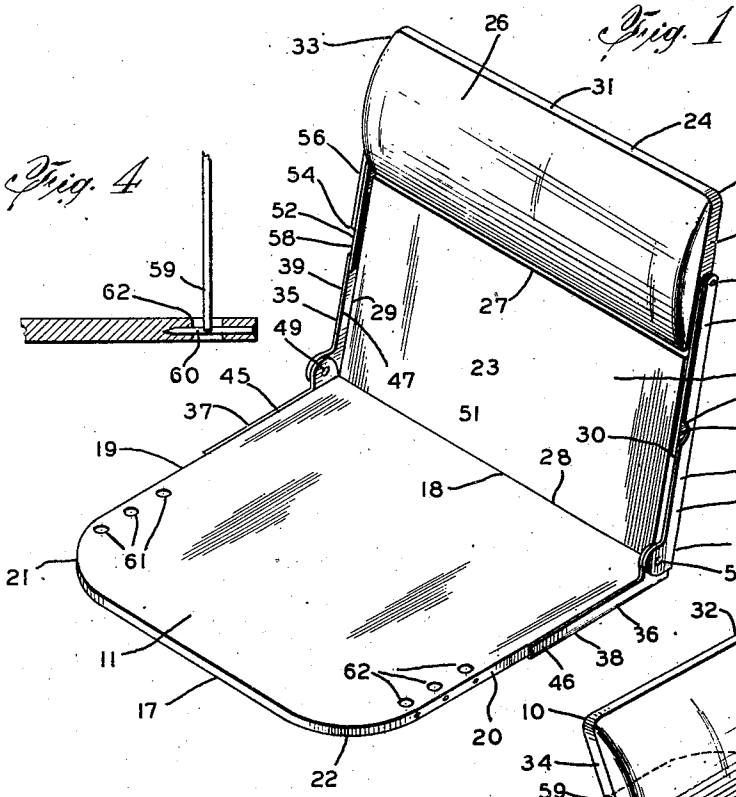


Fig. 4

Fig. 2

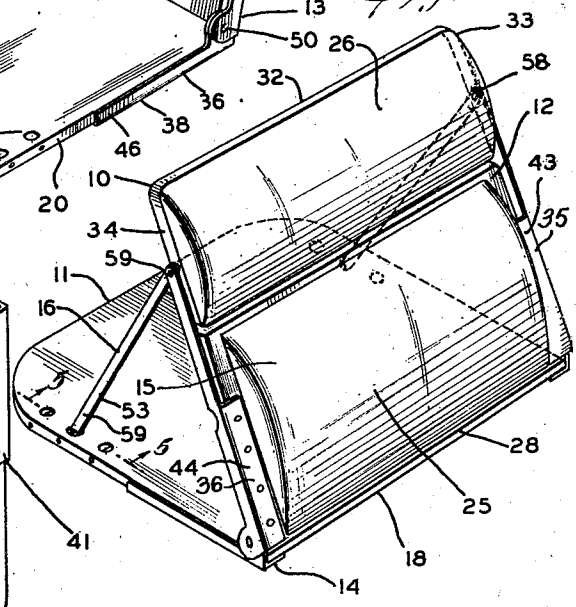


Fig. 3

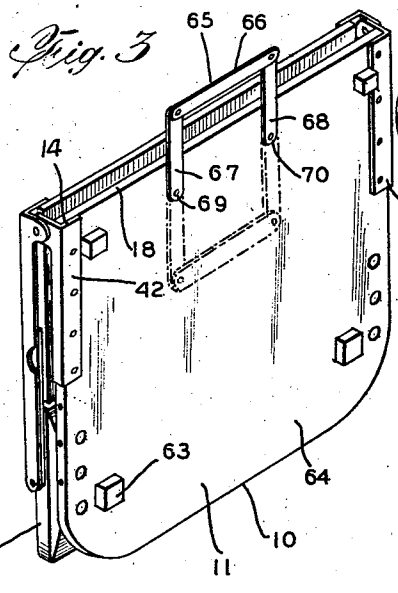
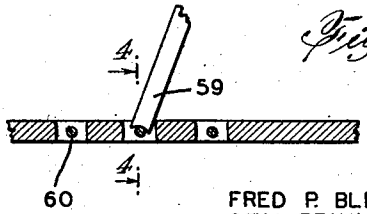


Fig. 5



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FOLDABLE BACK REST

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2 Claims. (Cl. 155—154)

1

This invention relates generally to the field of seating devices and more particularly to foldable back rests.

Among the objects of the present invention lies the provision of a combination back rest and head and shoulder rest which is, in the folded condition thereof, extremely compact.

Another object herein lies in the provision of a device of the class described which, in the folded condition thereof, is provided with collapsible handle means facilitating the convenient carrying thereof by the user when it is desired to transport the device from place to place.

Another object herein lies in the provision of a foldable combination back rest and shoulder and head rest which may be quickly and easily set up at a desired location by a user having no particular skill.

Another object herein lies in the provision of a device of the class described which, while light in weight and not bulky, is relatively strong and durable.

Another object herein lies in the provision of means by the use of which the device, when utilized as a head and back rest, may be adjusted to take a plurality of positions to accommodate the desires of the user, assuring a comfortable position of the weight supporting parts.

Another object herein lies in the provision of a device of the class described wherein the seat element is adapted for use upon various surfaces, as will more fully appear hereinbelow.

A feature of the present invention lies in the fact that the complete device is of relatively simple construction so that the same may be manufactured on a large scale at low cost and have a consequent wide distribution and use.

A still further object herein lies in the provision of a combination collapsible back rest and head and shoulder rest wherein a single element is adjustable through a plurality of positions so as to comfortably conform in position to the small of the user's back when the device is in a position to act as a back rest and to comfortably conform in position to accommodate the head of the user when the device is in a position to act as a head and shoulder rest.

These objects and other incidental ends and advantages will more fully appear in the progress of this disclosure and be pointed out in the appended claims.

In the drawings in which similar reference characters designate corresponding parts throughout the several views:

Figure 1 is a view in perspective as seen from the right and above, showing generally the front appearance of a combination back rest and head and shoulder rest embodying the invention. In this view the device is shown in a set-up condition for use as a back rest.

2

Figure 2 is a view in perspective showing the device of Figure 1 as altered in position to function as a shoulder and head rest. The parts are generally positioned in this figure as they might be seen from the rear of Figure 1 with the relatively movable plate and associated parts in an altered tilted position.

Figure 3 is a view in perspective showing the device in a folded or collapsed condition with the handle elevated for use.

Figure 4 is a fragmentary vertical sectional view as seen from the plane 4—4 on Figure 5.

Figure 5 is an enlarged fragmentary vertical sectional view as seen from the plane 5—5 on Figure 2.

In accordance with the invention, as illustrated in Figures 1–5 inclusive, the combination back rest and head and shoulder rest is generally indicated by reference character 10. The device 10 broadly includes a seat element 11 and a back element 12, the seat element and the back element being pivotally interconnected by pivotal mounting means generally indicated by reference character 13. In order to predetermine the greatest separation of the back element from the seat element the pivotal mounting means are provided with stop means 14. For the purpose of adjusting the interrelation of the back element and the seat element when pressure is applied from the rear surface 15 of the back element, adjustable bracing means 16 is provided.

The seat element 11 may be composed of any suitable planar material having adequate strength characteristics. We have found plywood or "Masonite" to be satisfactory. The seat element 11 has a forward edge 17, a rear edge 18, a right side edge 19 and a left side edge 20. The front and rear edges are preferably parallel, and this is also true of the side edges 19 and 20. The forward corners 21 and 22 are preferably rounded so as to present no sharp points which could hurt the sitter or snag stockings when the user is wearing them.

The back element 12 includes a primary plate 23 which is movable with relation to the seat element 11 and a secondary plate 24 which is pivotally associated with the primary plate 23. The primary plate 23 is preferably composed of a thin strong planar material, preferably plywood. This is also true of the secondary plate 24. At the

rear surface 15 of the back element 12 the primary plate 23 is preferably provided with a primary plate cushioning member 25 (see Fig. 2). One surface of the secondary plate 24 is provided with a secondary plate cushioning member 26. The cushioning members 25 and 26 may be of any suitable type as, for example, cotton felt, moss, curled hair or sponge rubber, secured in place and protected by a suitable covering material such as cloth, leather, coated fabric or artificial leather. Since such upholstery materials and construction are well known in the art to which the present invention relates, they are not shown as to constructional details in the drawings. It will be noted, however, that it is desirable that the cushioning members 25 and 26 have a relatively high resilience since it is desirable that they be compact so that when the device 10 is in folded condition it will not assume undesirable bulk.

The primary plate 23 has a front or upper edge 27 and a rear or lower edge 28, a right side edge 29 and a left side edge 30. The secondary plate has edges 31, 32, 33 and 34.

The pivotal mounting means generally indicated by numeral 13 includes a pair of hinges 35 and 36. The hinges 35 and 36 include seat element attaching members 37 and 38 and primary plate attaching members 39 and 40, respectively. The members 37—40 inclusive are each provided with attaching flanges 41—44, and guide flanges 45—48, respectively. The attaching flanges 41 and 42, and 43 and 44 are secured to the seat element 11 and the primary plate, respectively, in any suitable manner as, for example, by means of rivets. The hinges 35 and 36 are constructed for normal pivotal operation by the use of the pivot pins 49 and 50. As will be understood from a perusal of Figures 2 and 1, it will be seen that the juxtaposed ends of the attaching flanges are adapted to abut against each other and to thus form the stop means 14 which prevents the separation or opening up of the hinges 35 and 36 beyond a predetermined position or angle. This angle is preferably substantially greater than 90° for greatest comfort and not only positions the secondary plate cushioning member 26 to properly support the small of the user's back but also positions the forward surface 51 of the primary plate 23 so that it may support the sitter at a lower area. The inner opposed surfaces of the guide flanges 45 and 46 preferably abut against the edges 19 and 20 of the seat element 11 while the guide flanges 47 and 48 are preferably spaced outwardly from the edges 29 and 30 of the primary plate 23 to provide space for the brace members 52 and 53 which are disposed thereat. The brace members are stiff but highly resilient. The guide flanges 47 and 48 are provided with indentations 54 and 55 which expose portions of the brace members in the concealed inactive position thereof so that they may be engaged by the fingers of the user to pull them out to one of the active positions thereof.

As previously stated, the secondary plate 24 is pivotally connected to the primary plate 23 in such manner that the secondary plate may rotate about its own longitudinal axis which is disposed generally transversely to the device 10. The guide flanges 47 and 48 are provided with extensions 56 and 57 and at the relatively free terminals thereof are pivotally connected to the pivoted ends of the brace members 52 and 53 and to the edges 33 and 34 of the secondary plate substantially at the longitudinal axis thereof. In

order that the secondary plate and the brace members 52 and 53 may be conveniently manipulated and have some tendency to remain in a temporarily adjusted position thereof, it is desirable that a certain amount of compression or friction exist in the pivotal connection at the pins 58 and 59. While the frictional engagement of the parts just described may hold them in position when not under stress, it is desirable that the degree of friction be sufficiently low so that when the weight of the user is placed upon the cushioning member 26, the plate 24 may rotate to a position of equilibrium.

When the device 10 is in a position for use as a head and shoulder rest, as seen in Figures 2, 4 and 5, the lower ends 58 and 59 of the brace members 52 and 53 are adapted to engage a type of rack which includes a plurality of detent members generally indicated by reference character 60. The detent members 60 may be fabricated by perforating the seat element 11 with the rows of perforations 61 and 62 and then inserting nails inwardly from the edges 19 and 20. The exposed portions of the nails form the detent members 60. Obviously, any number of orifices in the rows 61 and 62 may be utilized so that the degrees of adjustment of angularity of the primary plate 23 may be fine or coarse.

For the purpose of permitting the utilization of the present device upon various surfaces, we have provided resilient friction blocks 63 on the lower surface 64 of the seat element 11. These blocks may be composed of rubber and serve to compensate when the seat element 11 is placed upon an irregular surface and also to prevent slippage of the seat element prior to and during the occupancy thereof.

The handle means 65 includes a handle member 66 which is pivotally connected at the ends thereof to the handle supports 67 and 68 at the outer ends thereof. The inner ends of the supports 67 and 68 are pivotally secured to the seat element 11 adjacent to the edge 18. This construction forms a collapsible U-shaped structure which may be collapsed inwardly of the edge 18 so that the same is concealed and does not form a dangerous protuberance when the device is set up for use. This concealment of the handle means 65 is illustrated in Fig. 2, and is accomplished by rotating the supports 67 and 68 in either direction from the position shown in Fig. 3 about the pivots 69 and 70. The parts may thus be moved to the position indicated by the dot dash lines on Fig. 3.

Operation

Assuming the device to be in a condition as shown in Figure 3, in order to use it as a back rest the handle means 65 is moved to the collapsed position thereof, as indicated by the dot dash lines on said figure. The edge 17 and the edge 31 or 32, as the case may be, are manually grasped and supported so that the attaching members 39 and 40 swing about the pins 49 and 50 and take the position shown in Figure 1. The device is now ready for use as a back rest. If by chance the secondary plate cushioning member was facing the opposite way it may be quickly rotated about the pins 58 and 59 so that it presents itself to support the small of the user's back. This use of the device is desirable on park benches which have no backs and similar benches located in ball parks, athletic stadiums, boats, etc.

When it is desired to use the device as a head and shoulder rest, the brace members 52 and 53

are grasped within the indentations **54** and **55** and pulled forward as seen in Figure 1, or rearward as seen in Figure 2, and the back element **12** is swung forward as seen in Figure 1 or rearward as seen in Figure 2. At a desired position of angularity the lower ends **58** and **59** of the brace members are engaged with the correspondingly positioned detent members **60**. The secondary plate **24** is rotated through 180° so that the cushioning members **25** and **26** both face in the same direction. The device will now appear as shown in Figure 2. In this use the device may be rested upon by a reclining person whose shoulders or the upper portion of whose back will engage the cushioning member **25** and whose head will engage the cushioning member **26**. The member **26** together with the plate **24** will rotate to reach a position of equilibrium in engagement with the user's head. It may be noted at this point that where desired the device, as shown in Figure 2, may be also used as a back rest in which the cushioning member **26** may engage the small of the user's back and the cushioning member **25** may engage a lower portion of the user's back. When so used, the sitter will actually be sitting upon the surface which supports the seat element **11** and not on the seat element itself. The device **10** is prevented from slipping out of position by the blocks **63**. The use of the device **10** as a shoulder and head rest is found convenient and comfortable at water resorts, on lawns, beaches, parks, etc.

Returning the device **10** to its original position of Figure 3 from either of the positions shown in Figures 1 and 2, is a relatively simple matter and requires only a reversal in order of the steps previously described.

It may thus be seen that we have provided a novel and useful device of the class described, which is highly adaptable and efficient in use.

We do not desire to be limited to the exact details shown for obvious modifications will occur to a person skilled in the art to which the present invention relates.

We claim:

1. A collapsible combination seat, back and shoulder rest and head rest comprising: a seat element; a back rest adapted in a first position and on one side thereof to support the user's back and in a second position and on the other side thereof to support the head and shoulders of the user, said back rest being pivotally connected to said seat element and including a primary member, extensions disposed outwardly of the primary member and a secondary member, pivotally connected to said extensions and freely rotatable about its longitudinal axis through at least 180 degrees; stop means to limit movement of said back rest away from the seat element in the first position in which the back element forms an angle with respect to the seat element of at least 90 degrees; adjustable bracing means at one end thereof being pivotally connected to said extensions and at the other end thereof detachably engageable with said seat element at a plurality of locations to secure said back element in the second position in which the back element forms an angle with respect to the seat element of less than 90 degrees; whereby when the back element is in said first position the secondary member may swing freely to adjust to a position of equilibrium to accommodate the user's back, and when the back element is in the second position the primary member may support the shoulders of the user and the secondary member may be reversed in position and swing freely to adjust to a position of equilibrium to accommodate the head of the user.

2. A device as claimed in claim 1 in which the seat element is provided with a plurality of transversely disposed detent members with which the relatively free ends of the adjustable bracing means are detachably engageable.

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