April 22 , 1924. 1,491,146

N. E. LARSON

OCCIPITAL APPLIANCE

Filed Oct. 9, 1922

Fig I

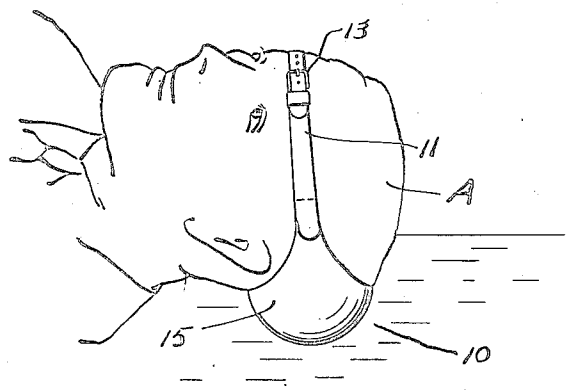


Fig III

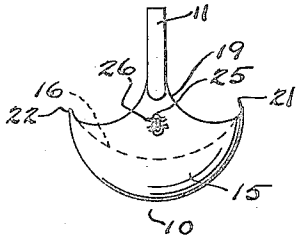


Fig II

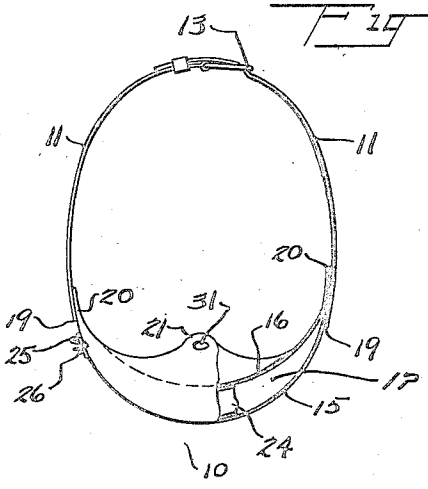


Fig V

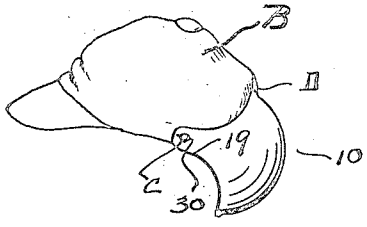
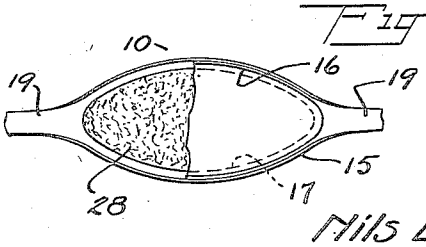


Fig IV



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UNITED STATES PATENT OFFICE.

NILS E. LARSON, OF NEW YORK, N. Y.

OCCIPITAL APPLIANCE.

Application filed October 9, 1922. Serial No. 593,354.

To all whom it may concern:

Be it known that I, NILS E. LARSON, a resident of the borough of Manhattan, in the county, city, and State of New York, have invented certain new and useful Improvements in Occipital Appliances, of which the following is a specification.

This invention relates generally to appliances that are designed to protect the head of a person from direct contact with hard surfaces, and it more particularly appertains to a portable article of this class which can be availed of as an armor, a guard, a rest, or a pillow for the head of the wearer, either while at work in a prostrate position, or if obliged to take repose in some place devoid of customary accommodations.

The main object of the invention is to provide an appliance of the class mentioned especially suitable for mechanics who are engaged in the pursuit of some avocation that calls for the performance of their labor, or part thereof, in a reclined position.

Another object is to produce a device of the nature set forth capable of being fitted over the occipital portion of the head so as to afford both protection and comfort to the wearer thereof when lying down upon a hard or rugged surface.

A further object is the production of a trim appliance of the type specified readily applicable to the human cephalon, and while affixed thereto permitting free, unobstructed movement thereof in any direction.

Still another object in producing an occipital appliance or device of the character described is so to fashion and arrange the component parts thereof that it may be altered both as to size and consistency at the convenience of the wearer to suit varying conditions.

A still further object is the provision of a collapsible appliance of the species referred to, which can be folded or contracted so as to permit the storing thereof in a space of small compass, when not in use or no longer needed.

An additional object is to supply a simple device of the kind alluded to, composed of few, strong and durable parts; capable of being quickly and easily assembled so as to be amenable to low cost of manufacture; and besides not liable or subject to get out or order.

Other objects and advantages of the invention will become apparent as the specification proceeds.

With the aforesaid objects in view, the invention consists of the novel combinations and arrangements of parts hereinafter described in their preferred embodiments, pointed out in the subjoined claims, and illustrated on the annexed drawing, wherein like parts are designated by the same reference characters throughout the several views.

In the said drawing:—

Figure I is a perspective view showing a practical embodiment of the invention applied to the head of a person in the manner required to protect the occiput when turned backwards in prostrate position;

Fig. II is a top plan view of the same form of the invention, detached, a part thereof being broken away to show the interior construction;

Fig. III is a side view of the appliance, as seen from the lower edge of Fig. II, parts being omitted;

Fig. IV is a rear view of a modified form of the device; and

Fig. V is a perspective view representing the device as applied to a cap.

Generally described, the invention under consideration includes in its organization a plurality of substantially elliptical pieces of pliable material that are secured together all around near their edges so as to provide a closed chamber therewithin. The latter may be inflated with air under pressure, or else filled with compressible matter that has the property of remaining sufficiently soft and yielding always to act as a desirable padding medium. The mated pieces of material, thus conjoined and expanded, constitute a cushion characterized both by firmness and a greater or less resiliency. A pair of ears, coinciding centrally with the major axes of the ellipses that constitute the opposite sides of the said chamber or cushion, are formed at the terminals thereof, the same affording connections for the adjacent inner extremities of a corresponding pair of attaching members, the outer ends of which are adjustably held together by a clasping element. These several parts, as just enumerated, make up a complete appliance adapted to encircle a person's head, with the cushion around the occipital portion thereof at the rear, and the attaching members clasped in front. However, the said parts may be sup-

plemented with lobes, preferably positioned at the points where the minor axes of the said ellipses terminate. The lobes here mentioned may be equipped with means for engaging fasteners carried by a cap or other headgear.

The advantages of the invention as here outlined are best realized when all of its features and instrumentalities are combined in the one and same structure, but, useful devices may be produced embodying less than the whole.

It will be obvious to those skilled in the art to which the invention appertains, upon becoming conversant with the details thereof, that the same may be incorporated in several different constructions. The accompanying drawing, therefore, is submitted merely as showing the preferred exemplifications of the invention.

Referring now to the views of the annexed drawing, for a detailed description of the invention, the numeral 10 denotes a cushion, which is approximately of crescent configuration and designed to be held substantially opposite the occiput of a human being, that is, the lower posterior portion of his or her head, as the case may be. The head is indicated by the reference letter A, in Fig. I of the drawing hereto appended. This cushion is preferably held in its assigned position by means of one or more straps, as 11, or other equivalent attaching members. If a pair of the latter is used, they are conveniently adjusted one relatively to the other and securely fastened together with the aid of a buckle 13, or similar clasping element. The straps, as will be seen, are placed transversely of the temples and fastened over the forehead, so that the appliance, considered as a whole, will encompass the entire cranium, substantially in the manner exemplified.

In its preferred embodiment, the cushion 10 aforementioned comprises a pair of approximately oval pieces 15 and 16, of pliant material, such for instance as india rubber, textile fabric, or the like. Of these two pieces, the outer one, indicated by the numeral 15, is the larger, and the inner, numbered 16, the smaller, relatively to the head A, to which they are fitted. As clearly shown in Fig. II, the said pieces 15, 16 are spaced apart to provide an intermediate inclosure or chamber 17, having substantially the shape of an ellipsoidal segment. The inner piece 16, it will be noted, is concavely dished with relation to the closed chamber 17 both lengthwise and transversely, while the outer piece 15 is of convex formation in the same directions. But, the curvatures of the two pieces are different in that the radii forming the outer one 15 are less than those of the inner one 16. The overlapping perimetral edges of the conjoined pieces are secured to one another in any approved manner, for instance by sewing, cementing, or vulcanizing.

Either or both of the above described pieces 15 and 16 may be extended, as at 19 and 20, along their major axes, to constitute ears serving as anchorages for the inner ends of the straps 11, previously mentioned. The outer ends of these attaching members, as before said, are provided with the buckle 13, coacting with a row of perforations, in a well-known manner, so that they can be drawn in lapping arrangement together, and tightened or loosened more or less according to requirements, in adjusting the appliance on the head of the wearer.

At 21 and 22, in Figs. II and III, are indicated supplementary lobes, located centrally in line with the minor axes of the united elliptical pieces 15 and 16. The purpose and use of these lobes or appendices will be more fully referred to hereinafter.

The chamber 17 is susceptible of dilatation in several ways, all contemplated by the invention. For example, it can be directly charged with air at atmospheric or higher pressure, as is done in a certain line of sportmen's goods and some pneumatic appliances. Or, as shown in the sectioned part of Fig. II, there can be lodged within the chamber a sack 24, of thin gutta percha, which may be inflated by blowing thereinto through a nipple 25. The latter will subsequently be folded or turned aside and held by lacing 26, or otherwise, to the adjoining face or wall of the outer piece 15, through which it issues. The lacing, it will be observed, is resorted to in order to prevent the air confined in the chamber from escaping, when the appliance is being manipulated or in anywise subjected to compression.

Fig. IV represents a somewhat modified construction of the cushion 10. Part of the outer piece 16 has been removed from this view in order to show a special form of filling for the chamber 17, pertaining to this modification. As there represented, the chamber may be filled with a padding substance 28, of resilient character, such as porous caoutchouc (so-called sponge rubber) or other material of analogous nature. A filling of this description is light enough for practical use, and has the advantage over the air-inflation that it need not be replaced at any time, except in a case where the entire appliance must be renovated.

In Fig. V is indicated the mode of securing the cushion 10 to a cap, as B, or other headgear. The straps 11 are omitted in this instance, and the ears or anchorages 19 and 20 are utilized instead. As Fig. V shows, the ears 19, 20 are provided with slit-like openings 30, and the lobes 21, 22 have similar apertures 31 (more clearly seen in Fig. II), which openings and apertures

are respectively intended to take over buttons, as C and D, or other fasteners, attached to the cap B at appropriate places. The cushion 10 is thereby enabled to be quickly applied or taken off, and no recourse need be had to straps, buckles, clasps or other contrivances of that category.

From the foregoing it will be apparent that a convenient and comfortable appliance is afforded by the invention, which many people can use to their own advantage and satisfaction. For example, this improved appliance will prove most beneficial to an automobile mechanic, who as is well known has to spend considerable time lying under a car, with the back of his head touching the ground or a hard floor, in order to make certain adjustments or repairs of various parts which cannot be reached otherwise. The appliance not only will safeguard his head against injury, but it provides a support or rest therefor as well, at the correct height, without interfering with the movements of the head, whether to turn it sideways or lifting the same, as the weight of this occipital cushion is a negligible quantity. The invention is available also as a portable headrest to persons forced to travel in railway coaches that lack sleeping accommodations; it likewise may be advantageously substituted for a cumbersome pillow in a camper's outfit; and it can be put to other uses which there is no necessity here to recite.

While certain preferred embodiments of this device have been shown and described, it will be understood that changes in the form, arrangements, proportions, sizes and details thereof may be made, without departing from the scope of the invention as defined by the appended claims.

Having described my invention what I desire to secure by Letters Patent and claim, is:—

1. A cushion adapted to fit the human occiput, said cushion composed of a pair of different size oval pieces of pliant material secured together at their edges, the said pieces being dished concavely both transversely and longitudinally to conform to the back of the head and providing a space between them for a resilient medium, and extensions at the longitudinal ends of said cushion for securing the latter to the head of a wearer.

2. In a head cushion, a pair of inner and outer substantially oval pieces of pliant material secured together near their edges, the outer piece being formed according to a sharper curvature than the inner piece, the latter having its inside face curved longitudinally and laterally to conform to the back of the head, said pieces providing a space between them adapted to receive a resilient filling medium, and means at plural points along the edges of said cushion for securing the same to an attaching means for application to the head of a wearer.

NILS E. LARSON.