

Feb. 8, 1944.

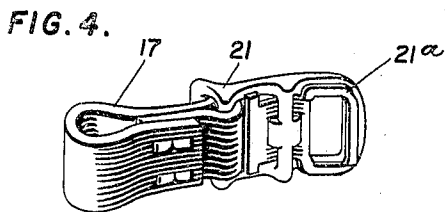
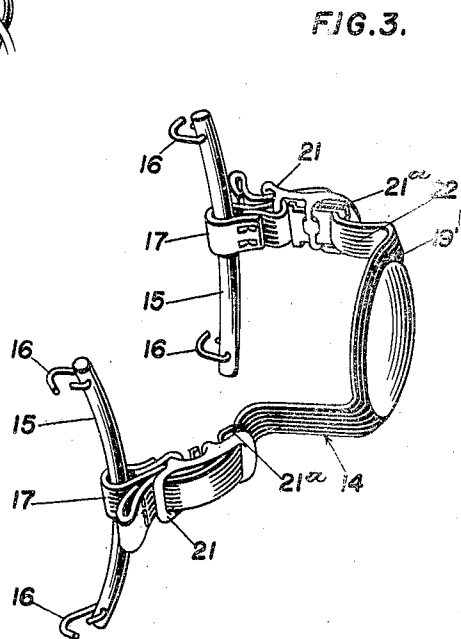
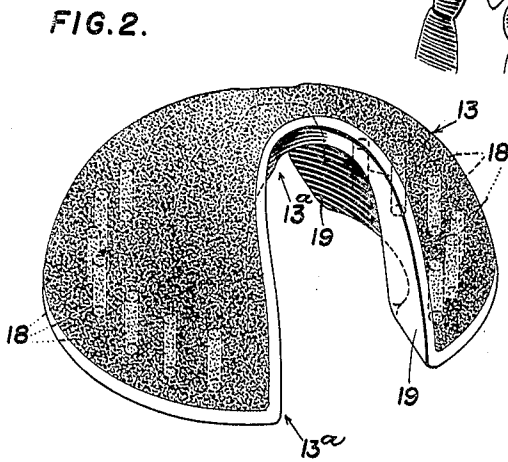
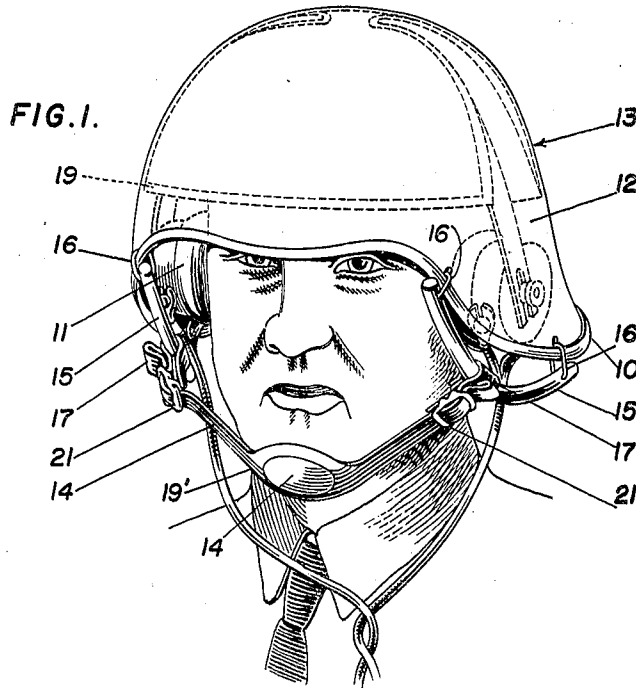
T. J. FLYNN ET AL

2,340,872

HELMET

Filed May 13, 1942

2 Sheets-Sheet 1



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FIG. 5.

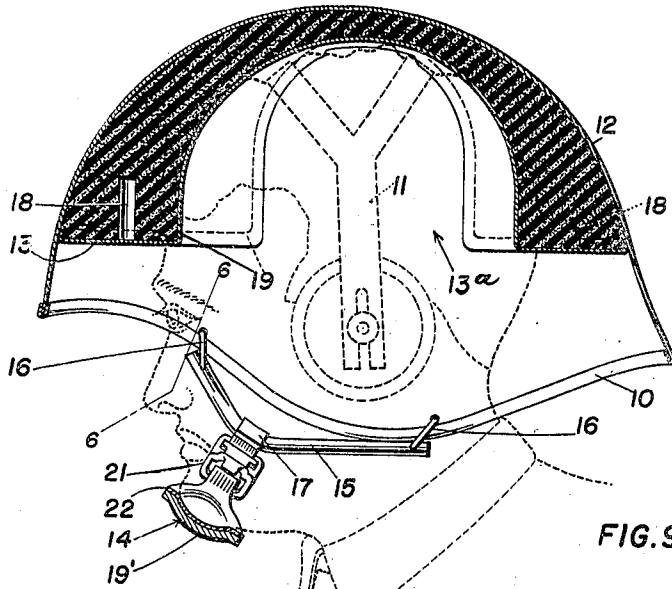


FIG. 6.

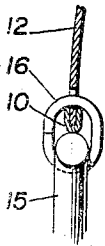


FIG. 9.

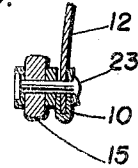


FIG. 7.

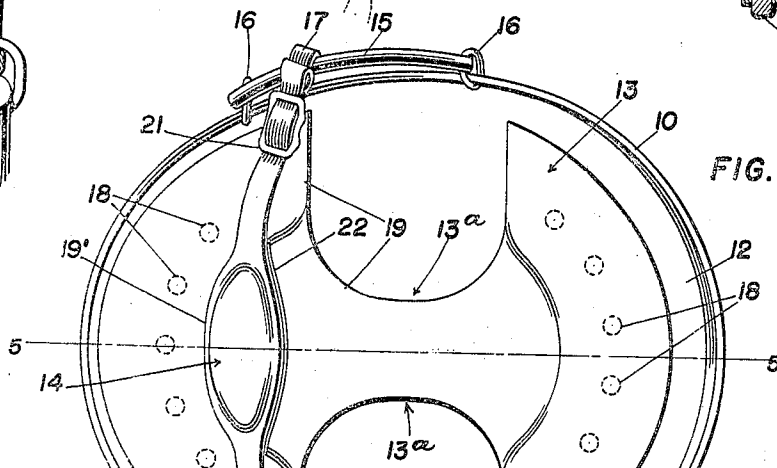
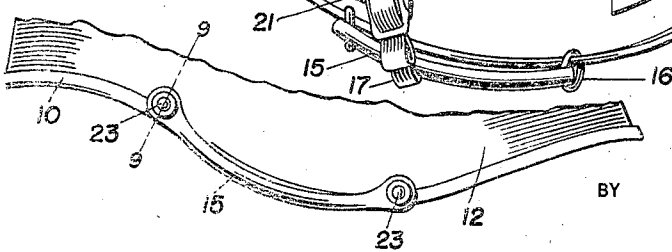


FIG. 8.



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UNITED STATES PATENT OFFICE

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HELMET

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Application May 13, 1942, Serial No. 442,798

4 Claims. (Cl. 2-6)

(Granted under the act of March 3, 1883, as
amended April 30, 1928; 370 O. G. 757)

This invention relates to body armor, and more particularly to a helmet which may be worn by persons engaged in hazardous occupations, such as construction workers, "sand-hogs," etc., and particularly persons in the military services, such as soldiers, sailors and marines, to protect the head and neck from flying or falling fragments.

This type of helmet is particularly designed for use of persons who must wear certain types of equipment on their heads, such as telephone headsets or the like, while in performance of their duties. Accordingly, the helmet has been designed so as to provide space within its confines for a telephone headset, or other apparatus, affords a maximum of protection to the wearer, and will be comfortable to wear over long periods of time.

It is therefore an object of this invention to provide a helmet which will protect the wearer and be more comfortable over long periods of time.

Another object of this invention is to provide a helmet which extends over the major portions of the head and neck of the wearer and which permits the wearer at the same time to be equipped with a telephone headset, earphones, or the like, at the same time.

A further object of the invention is to provide a helmet which is provided with a cushioning element and which may be worn by a person who is to be equipped with a telephone headset, or the like.

Another object of the invention is to provide a chin strap assembly which will securely maintain the helmet on the head of the wearer during adverse conditions, and which may be adjusted to secure the helmet to different sizes of heads.

Still further objects, advantages, and improvements will be apparent from the following description of the invention taken in connection with the accompanying drawings, in which:

Figure 1 is a perspective view of the assembled helmet as worn, and showing a telephone headset positioned therein.

Figure 2 is a perspective view of the cushioning element.

Figure 3 is a perspective view of the chin strap assembly together with slings and links for attachment to the edge of the helmet.

Figure 4 is a perspective view of one of the slides and associated buckle which holds the chin strap.

Figure 5 is a view in elevation along the central longitudinal section 5-5 of Figure 7.

Figure 6 is a partial sectional view, taken along

the line 6-6 of Fig. 5, showing the attachment of the link and sling to the edge of the helmet.

Figure 7 is an inverted plan view of the assembled helmet.

Figure 8 is a side view of a portion of the helmet showing a modified form of means for attaching the sling.

Figure 9 is a sectional view, taken along the line 9-9 of Fig. 8.

Referring now to the drawings, on which like numerals of reference are employed to designate like parts throughout the several views, and more particularly to Fig. 1 thereof, there is shown therein a person such as a soldier or sailor wearing a helmet which is the subject matter of this invention, and having incorporated therein a telephone headset 11 for the purpose of receiving instructions for the carrying out of his duties while under fire.

The body of the helmet 12 is constructed by drawing, stamping, or otherwise shaping a single piece of sheet metal of sufficient thickness for the purpose to which the helmet is intended. In order to present a smooth surface at the edge, a metal beading 10 is formed on the periphery of the helmet and extends entirely therearound. For uses other than warfare, such as for construction workers, the body 12 may comprise a synthetic resin, or thermoplastic material of sufficient rigidity.

The body part 12 is supported upon the head by a cushioning element 13 which preferably comprises a suitably prepared piece of ellipsoidal shaped sponge rubber fitted within the helmet body. A chin strap assembly 14 passes under the jawbone of the wearer and thus holds the helmet in place. The slings 15 are attached to the helmet body 12 by means of connecting links 16, while the chin strap assembly 14 is movably attached to the slings 15 by means of slides 17.

Referring now to Fig. 2 it will be observed that the cushioning element 13 may be formed of a single piece of sponge rubber, or other similar resilient material. Nevertheless, if desired, the cushioning element could be formed in several sections which would be assembled when attached to the helmet body 12. This cushioning element should be formed so that its outer convex surface will conform to the inner concave surface of the helmet body, while the inner concave surface of the cushion will conform in general to the contour of a human head. Vertically extending openings generally indicated at 13a are provided on each side of the cushioning element to allow for the positioning of a telephone headset or other

apparatus, on the head and within the confines of the helmet body. A series of interiorly extending spaces or voids 18 are provided within the forward and after portions of the cushioning element to allow for compression and deformation of the cushion due to variations in head sizes when the helmet is worn.

The spaces 18 are hermetically sealed with a thin layer of a material 19 such as synthetic rubber or pure latex which is likewise applied over all the surfaces of the cushioning element which would otherwise be exposed to the action of the atmosphere or perspiration of the wearer. (See Figs. 2 and 7.) Over this a layer of cloth or other material is applied which has a high coefficient of friction with respect to human hair and flesh. This cloth should preferably be extended slightly over the outer convex surface of the cushioning element which will normally be attached to the helmet body, as shown particularly in Fig. 2. In this way the edges of the cloth will be concealed and secured under the cushion 13 when the cushion is secured to the helmet body by means of rubber cement or other suitable adhesive material.

The chin strap assembly 14, which is shown in detail in Fig. 3, comprises a chin strap 19', buckles 21, slides 17 and slings 15. The strap 19' and slides 17 are preferably made of leather or any other suitably flexible material. The central portion of the chin strap 19' is enlarged so as to permit its being shaped to fit snugly over the jawbone without likelihood of slipping out of position. To the inner surface of the chin strap 19' there should be attached, either by stitching or cementing a lining 22 of some soft and pliable material such as chrome retanned horsehide, although this is not essential. The buckles 21 are attached to the slings 15 by slides 17 (see Fig. 4) and are of the ordinary friction lock type. As will be seen, the chin strap 19' may be moved longitudinally of the slings 15, so that the position of the chin strap may be adjusted relative to the head of the wearer. The ends of the chin strap 14 pass through the locking slide 21a of the buckles 21 so that the wearer may adjust the length of the chin strap simply by holding the buckle and pulling up on the chin strap. The slings 15 are made of short lengths of some material, such as leather or the like, and are provided with holes at their ends for attachment to the helmet body 12 by means of the connecting links 16, or by any other suitable means. It will be noted that the points of connection between the slings 15 and the helmet body are widely spaced, thus providing a two-point anchorage for each sling to the helmet and thereby preventing any possibility of the helmet tilting about the head of the wearer. This construction is shown in detail in Fig. 6. A modified form of sling and attaching means is shown in Figs. 8 and 9. In this modified form the sling 15 may be stamped

out of leather or similar material in the shape shown and attached to the helmet body 12 by means of rivets 23 which pass through the holes provided in the sling and helmet body.

While the invention has been described with reference to certain preferred examples thereof which give satisfactory results, it will be understood by those skilled in the art to which the invention pertains, after understanding the invention, that various changes and modifications may be made without departing from the spirit and scope of the invention, and it is my intention, therefore, to cover in the appended claims all such changes and modifications.

The invention herein described may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A helmet for use with a headset or other apparatus to be worn on the head, comprising a helmet body, an insert of resilient material attached to the inner surface of said body, said insert being cut away over portions of each side so as to provide space for said apparatus to be worn upon the head, and two-way adjustable means for securing the helmet to the wearer, including an elongated sling attached to each side of the helmet and an adjustable chin strap slidably secured to said slings.

2. A helmet comprising a helmet body, an insert of resilient material attached to the inner surface of said body and adapted to conform generally to the contour of a head, and two-way adjustable means for securing the helmet to the head, including an elongated sling attached to each side of the helmet and an adjustable chin strap slidably secured to said slings.

3. A helmet comprising a helmet body, an insert of resilient material attached to the inner surface of said body and adapted to conform generally to the contour of a head, and means for securing the helmet to the head, including an elongated sling attached to each side of the helmet and a chain strap slidably secured to the slings for longitudinal adjustment relative to the helmet.

4. A helmet comprising a helmet body, an insert of resilient material attached to the inner surface of said body and adapted to conform generally to the contour of a head, and adjustable means for securing the helmet to the head, said means including an elongated member attached to each side of the helmet at a plurality of widely spaced points and a chin strap slidably secured to said members for longitudinal adjustment relative to said members and said helmet body.

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