United States Patent [19]

Dunning

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[54] **FOOTBALL FACEMASK**

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 316,126, Dec. 18, 1972.

[52] **U.S. Cl.** **2/9**
[51] **Int. Cl.** **A42b 3/00**
[58] **Field of Search** 2/9, 10, 173

[56] **References Cited**

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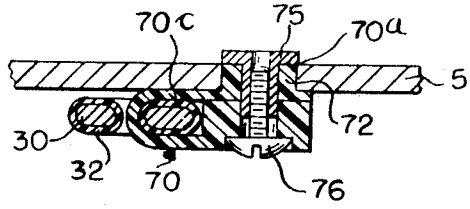
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Assistant Examiner—Peter Nerbun
Attorney, Agent, or Firm—Baldwin, Egan, Walling & Fetzer

[57] **ABSTRACT**

A football facemask of one-piece construction formed of a base material such as aluminum coated with a suitable plastic-like coating. The facemask has a four-point resilient attachment to a football helmet capable of substantially absorbing shock and thus preventing injury to the player.

5 Claims, 4 Drawing Figures



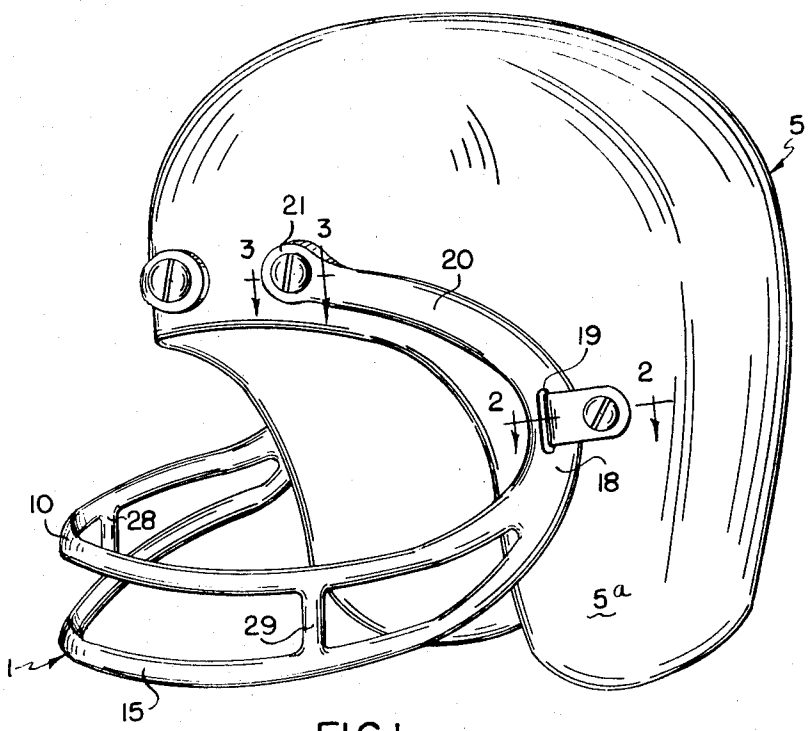


FIG.1

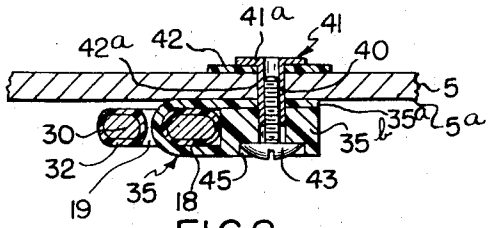


FIG.2

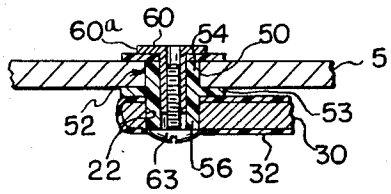


FIG.3

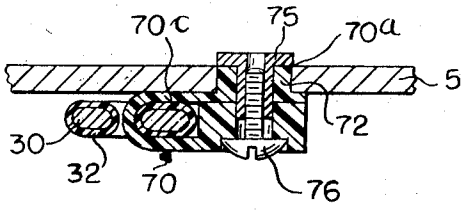


FIG.4

FOOTBALL FACEMASK

This application is a continuation-in-part of my co-pending application Ser. No. 316,126, filed on Dec. 18, 1972.

BACKGROUND OF INVENTION

The present invention is directed to a football facemask such as the type disclosed and claimed in the present applicant's U.S. Pat. Nos. 3,319,261; D. 204,927; D. 204,730; D. 204,731; D. 207,479; and U.S. Pat. No. 3,263,236 of D. C. Humphrey.

The facemask of this invention distinguishes over the present state of the art of facemasks development of the type referred to by providing a facemask construction formed of a single piece of material such as aluminum or like material coated with a suitable plastic coating and which has a four-point resilient attaching means to the player's helmet, each being capable of some movement upon receipt of a blow being struck thereon to substantially absorb the resulting shock.

OBJECTS OF THE INVENTION

It is an object of the present invention to provide an improved facemask that is strong, lightweight and durable, formed of a strong, economical, one-piece integral construction, the mask being thus durable and lightweight; being made from a base material such as an aluminum alloy protected by a plastic coating, and which is provided with a four-point suspension or attaching means for attachment to the player's helmet.

Another object is to provide a facemask construction as above described and which is formed to lie in close proximity along the surface of the player's helmet whereby the latter provides additional surface support therefor.

These and other objects will become apparent from the specification that follows, the appended claims, and the drawings in which:

DESCRIPTION OF DRAWINGS

FIG. 1 is a front elevational view of a facemask embodying the present invention and attached to a conventional football helmet;

FIG. 2 is a sectional view taken along the line 2—2 indicated in FIG. 1;

FIG. 3 is a sectional view taken along the line 3—3 indicated in FIG. 1; and

FIG. 4 is a sectional view of a modified attachment for attaching the sides of the facemask to the helmet.

The present invention provides a strong, economically made facemask of an integral one-piece construction of plastic-coated material such as aluminum. The mask of the present invention has many advantages, one of which is its very light weight which contributes to the speed and endurance of the player wearing said mask.

As seen in the drawings the facemask identified in its entirety at **1** is provided for attachment to a conventional football helmet **5**, the mask comprising an upper arcuately curved bar **10** and a lower arcuately curved bar **15**. The bars **10** and **15** extend across the face opening of the helmet to protect the face of the player, the side ends of the bars converging together to define an integral side fastening portion **18**, each portion having an elongated slot **19** therein.

Each side end portion of the mask is formed integrally with an upper extending arm or head portion **20** continuing upwardly from said portion **18** and which is intended to lie on the surface of the forehead part of the helmet **5**. As best seen in FIG. **1**, each head portion **20** in turn terminates in a somewhat enlarged circular terminal **21**. Each terminal is provided with a hole **22** formed preferably centrally therein.

As readily seen in the drawings, a pair of integral short generally vertical bars **28** and **29** are provided between the upper bar **10** and the lower bar **15**. The mask is made of a suitable base material, preferably being stamped from an aluminum alloy core **30** that is coated with a tough durable plastic coating **32** which is softer than the core. The core is preferably made from a high strength, durable, shock resistant, stampable, aluminum alloy of a high aluminum content such as aluminum alloy 2024 T–3.

The side portions **18** are resiliently attached to the opposed side surfaces of the helmet **5** by means of elongated straps **35** each of which is looped through the slot **19** and wrapped around the side end portion **18** as best seen in FIGS. **1** and **2**. One end **35***a* of strap **35** lies against the outside surface **52** of the helmet **5**. The other end of strap **35** is integrally formed to abut against the opposite surface of the end **35***a* of said strap. With the strap looped through the slot **19**, the bumper **35***b* is positioned as best seen in FIG. **2** in close proximity to the adjoining surface part **18** of the mask whereby as a result of a blow being struck upon and received by the mask tends to move rearwardly and he mask is forced against each bumper **35***b* whereby the shock is substantially absorbed. The bumper **35***b* and opposite strap end **35***a* are provided with mating apertures as seen in FIG. **2** through which the stem **40** of a fastener **41** shown in its present form as somewhat T-shaped in section. As seen in FIG. **2**, the stem **40** of the fastener is extended from within the interior of the helmet through a hole **42***a* in the helmet wall and thence through the strap apertures. A suitable plastic washer **42** is preferably disposed within the helmet interior and is interposed between this interior surface and the head **41***a* of the fastener **41**. A screw **43** is threadedly engaged within the fastener **41** being inserted through the aperture of the bumper **35***b*, the latter preferably having a recess or undercut portion **45** formed therein to accomodate the slotted head of the screw **43**.

With this construction, the fastener **41** and associated screw **43** resiliently fasten each side part **18** of the facemask to the adjacent side or ear portion of the helmet so that a relatively small amount of movement is realized at said connection upon a blow being struck to the facemask capable of absorbing the shock resulting therefrom.

As seen in FIGS. **1** and **3**, each upper terminal **21** of the facemask is also resiliently attached to the front forehead portion of the helmet **5**, and for this purpose the helmet is provided with a pair of apertures **50** spaced apart so that one of said apertures underlies one of said terminals **21**.

Each terminal **21** is formed with aperture **22** as aforementioned which mates with each helmet aperture **50**.

An elongated cylindrical bushing **52** is formed integrally with an enlarged circular shoulder **53** approximately at its middle to define upper part **54** and lower part **56** as seen in FIG. **3**.

The upper part **54** is insertable into helmet aperture **50** sufficiently to place the shoulder **53** against the outside surface of the helmet **5.** The lower part **56** is insertable into terminal aperture **22.**

An elongated cylindrical internally threaded nut **60,** T-shaped in cross section, is placed within the bushing **52.** A suitable plastic washer **61** is interposed between the head **60***a* of the nut **60** and the interior surface of the helmet **5.** Screw **63** is extended through the opposite end of the nut **60** and threaded therein to resiliently bind the terminal **21** to the helmet **5.**

As seen in FIGS. **1** and **3,** upon a blow being received on the mask **1** each terminal attachment is effective to provide a resilient connection operable to absorb said shock. As will likewise be apparent, the attaching means incorporated herein provide a four-terminal attachment, each of which is capable of absorbing any blows applied to said mask.

In FIG. **4** is shown another embodiment of mounting strap **70** for resiliently mounting each side part **18** of the facemask to the helmet. Strap **70** is somewhat similar to strap **35** but has a bushing **70***a* formed integrally on its one end surface **70***c* lying over the helmet exterior, and which bushing extends into the aperture **72** formed in the side wall of helmet **5.** Strap **70** is also preferably formed with bumper **70***b* which functions in the same manner as bumper **35***b* in the embodiment of strap **35** shown in FIG. **2.**

Fastener **75,** which is shown to be similar in cross section to fastener **41,** extends through bushing **70***a* from within the interior of the helmet **5,** and screw **76** threadedly engaging said fastener resiliently fastens each side portion **18** of the facemask to the associated side of the helmet **5.**

Having thus described one embodiment of the present invention it is realized that the same is susceptible to various modifications and combinations of parts coming within the scope of the inventive concepts thereof.

What is claimed is:

1. In a face mask and a helmet wherein the mask is an integral one-piece construction of a light metal core and a plastic coating covering said core, and wherein the mask comprises a plurality of arcuately curved bars which extend across the face opening of the helmet and which converge on each other at each end to form integral side portions and means for operable attachment of said side portions to the helment, and said mask having arm portions integrally connected with said side portions lying along the surface of the helmet overlying the forehead of the user thereof, and each arm portion terminating in a terminal, said terminals being spaced apart from each other on said helmet surface, fastening means fastening each terminal to the helmet comprising a bushing having a first part extending into the helmet and a second part extending into said terminal, an enlarged shoulder surrounding said bushing and located in between said first and second parts, fastener means disposed in said bushing and in pressure engagement with each said helmet and said terminal to resiliently bind the latter to said helmet.

2. Fastening means for a face mask as defined in claim **1** and wherein the fastening means includes an internally threaded nut disposed in said bushing and screw means threadedly engaged with said nut.

3. Fastening means for a face mask as defined in claim **1** and wherein washer means are interposed between the nut and the helmet.

4. Fastening means for a face mask as defined in claim **1** and wherein the means for operable attachment of the side portions of the helmet comprise strap means having bumper means positioned to be engaged by the face mask when a blow is struck thereon so as to absorb the force of said blow.

5. Fastening means for a face mask as defined in claim **4** and wherein fastener means extend through the bumper means and the strap means in pressure engagement with said helmet and said strap means to resiliently bind the side portions of said face mask to said helmet.

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