

Oct. 16, 1962

L. L. GREENBLUM

3,058,462

TEETH PROTECTOR

Filed Aug. 23, 1961

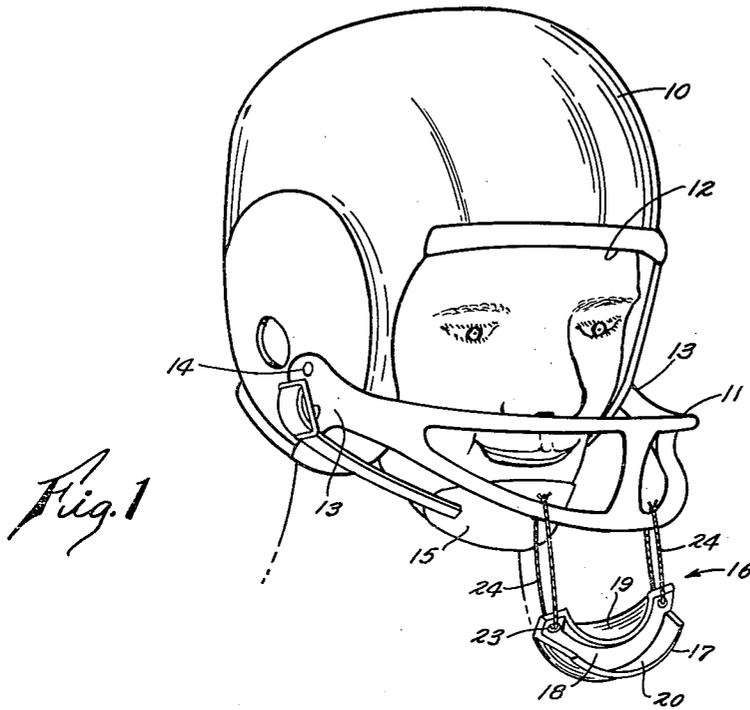


Fig. 1

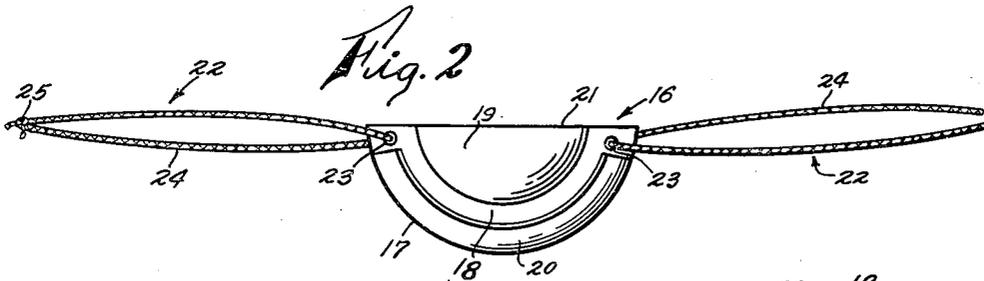


Fig. 2

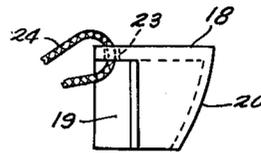


Fig. 3

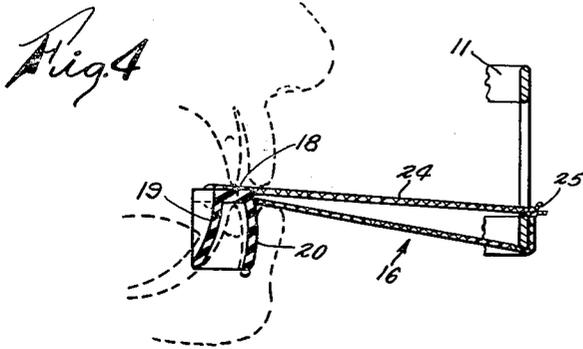


Fig. 4

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3,058,462

TEETH PROTECTOR

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4 Claims. (Cl. 128—136)

My invention relates to improvements in teeth protectors for athletes and particularly to a novel teeth protector for preventing involuntary and forceful closing of the lower and the upper sets of teeth of a football player wearing a protective headgear that has the usual face guard bar affixed thereto.

In present day competitive contact sports, such as football, or the like, a head protector or helmet is worn by the players and these helmets are provided with face guard bars which extend across the forward opening of the helmet and are mounted on the helmet body on both sides of said opening to protect the player's face from contact with moving objects directly in front of his face. There remains, however, the problem of preventing damage to the player's teeth resulting from the forceful closing of the jaws by objects moving upwardly against the lower jaw which have caused damage to the player's tongue or which bring the teeth together with such impact as to crack or damage one or more of them.

It is, therefore, the main object of my invention to provide a teeth protecting mouthpiece for athletes wearing headgear having a face guard bar fixed thereon which mouthpiece has an improved attachment means with said face guard that will hold it in an attention attracting and observable position in front of the player's face at times when the mouthpiece is not required in play.

Another object of the invention is to provide a mouthpiece device having the foregoing characteristics which will provide a means for self ejection of the mouthpiece from the player's mouth into an inoperative position by voluntary or involuntary opening of the mouth. Involuntary opening of the mouth would occur if the player happened to be knocked unconscious by a blow whereby the mouthpiece would be ejected from the player's mouth or it may be voluntarily ejected from the mouth when it is not required for play.

A further object of the invention is to provide a novel and improved teeth protector capable of fitting mouths of substantially all athletes and which may be packaged in a small unit for attachment to the face protector guard bar of a football helmet, or the like.

With these and other objects of the invention in prospect the present invention will be fully understood from the following description considered in connection with the accompanying illustrative drawings, wherein:

FIG. 1 is a perspective view of a player wearing a headgear and its affixed face guard bar with my teeth protector shown attached to said bar.

FIG. 2 is a top plan view of my teeth protector prior to its attachment to the face guard bar of the headgear.

FIG. 3 is a side elevational view of the teeth protector shown in FIG. 2.

FIG. 4 is a central, cross-sectional view taken through my mouthpiece interposed between the player's teeth, the player's mouth being shown in dotted lines and the face guard bar of the headgear being broken away and shown in section.

Referring to the drawings the numeral 10 designates a protective headgear used as required equipment in the game of football, said headgear being provided with a face guard bar 11 that has a generally arcuate shape and is positioned on the headgear to extend across and forwardly of the forward opening 12 in the headgear. As shown in FIG. 1 the bar is reticular and has its ends 13 fastened as by rivets 14 to the headgear body on opposite

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sides of the opening 12. The guard bar 11 is thus positioned on the headgear to protect the face, eyes, nose and mouth of a player from blows or objects moving from in front of the player's face and it has been generally recognized that this guard bar is effective against such blows and forces. The protective headgear is also provided with a chin strap 15 designed to prevent displacement of the headgear during use thereof.

My teeth protector 16 is designed for use with the athletic headgear 10 and its face guard bar 11 to prevent damage to the player's teeth resulting from impact of the lower jaw with upwardly moving objects or forces which would otherwise cause the player to involuntarily and forcefully close the upper and lower sets of teeth on each other. The protector includes a mouth insert member indicated by the reference numeral 17 and which is generally shown and described in my Patent 2,800,898 of July 30, 1957. This mouth insert member is constructed of a one-piece, resilient body that is horse shoe shaped in plan and is adapted to be received between the front teeth of the upper and lower front sets of teeth of an athlete in order to prevent violent physical contact between the sets of teeth when a blow is received on the lower jaw. As best shown in FIGS. 2, 3 and 4 the insert has a U-shaped bottom wall 18 that is to be interposed between the front portions of the upper and lower sets of teeth when the mouthpiece is in operative position (FIG. 4). The bottom wall has an arched wall 19 joined to its posterior edge and the anterior edge of said bottom wall has a curved wall 20 joined thereto, said wall 20 being curved anteriorly to form with the bottom and arched walls a curved trough for receiving the front teeth of a set of teeth and the gum portions therefor. As shown in FIG. 4 the insert 17 is best adapted to fit the front teeth of the lower set of teeth but may, if desired, be reversed and used to fit the upper set of teeth, it being the main objective that the bottom wall 18 of the mouth insert be interposed between the upper and lower teeth when the insert is being worn.

As best illustrated in FIG. 2 the ends of the curved wall 20 terminate forwardly of the straight posterior edge 21 of the mouth protector thus providing a lateral clearance at the sides of the insert for the attachment of the flexible headgear connector means 22 for the insert. To this end a hole 23 is formed through each end portion of the bottom wall 18 and through each of said holes there is threaded a flexible longitudinally extensible connector cord 24. One of said cords may be knotted as at 25 whilst the ends of the opposite cord may remain unconnected for the purpose of readily connecting the said ends to the face guard bar 11 of the headgear 10. In FIG. 1 there is illustrated a manner of connecting and positioning the mouth insert 17 on the face guard bar and, as indicated therein, the insert 17 has one of its flexible cords 24 connected one on each side of the central portion of the face guard bar to swing or dangle the insert in front of the athlete's face, the insert being suspended on the bar at all times that the headgear is worn in a position to attract the attention of the player and be readily taken into the athlete's mouth when it is required as a teeth protector for a forthcoming play.

With reference to FIG. 4 it will be understood that when the mouth insert is positioned in the athlete's mouth, the flexible cords 24—24 will be elongated and under slight tension so that when the player's jaws are relaxed either voluntarily or involuntarily, the cord will pull the insert from the athlete's mouth.

It will therefore be understood that I have provided a protective teeth insert for the mouth that will prevent forceful closing of the lower and upper sets of teeth of the athlete whilst playing the game of football, or the like, and which will remain in an observable and accessi-

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ble position for immediate insertion into the mouth when it is required for actually playing of the game of football, or the like.

Having thus described my invention and the best manner of using it I further contemplate that my teeth protector may be associated with the headgear proper or with a headgear accessory other than the particular face guard bar 11 provided my teeth protector, when not in actual use, be suspended from the headgear to swing in front of the player's face in an observable position substantially by the means described herein.

What is claimed is:

1. A protective mouthpiece to prevent involuntary and forceful closing of the lower and upper sets of teeth of an athlete wearing a headgear having a face guard bar fixed thereon comprising a mouth insert made of a one-piece, resilient material and having a U-shaped bottom wall adapted for interposition between the upper and lower sets of teeth an arched wall joined to the posterior edge of the bottom wall and a curved wall joined to the anterior edge of said bottom wall, said arched and curved walls adapted to embrace the front teeth and gums of one set of teeth, a hole formed through the bottom wall, a flexible, longitudinally extensible core extending through the hole in the bottom wall, and means for securing the opposed free end of the cord to the central portion of the face guard bar.

2. The protective mouthpiece set forth in claim 1 characterized by the fact that the means for securing the opposed free end of the cord to the central portion of the face guard bar consists of a cord in the form of a closed loop passing through the hole in the bottom wall, and the free end of the cord being adapted to be engaged around the face guard bar.

3. A protective mouthpiece to prevent involuntary and forceful closing of the lower and upper sets of teeth of an athlete wearing a headgear having a face guard bar fixed thereon comprising a mouth insert made of a one-piece resilient material and having a U-shaped bottom wall adapted for interposition between the upper and

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lower sets of teeth, an arched wall joined to the posterior edge of the bottom wall, and a curved wall joined to the anterior edge of the said bottom wall said arched and curved walls adapted to embrace the front teeth and gums of one set of teeth, the curved wall terminating anteriorly of the bottom wall at the sides thereof, a hole formed through the bottom wall at each side thereof, a flexible, longitudinally extensible cord having its central portions extending through each hole, and means for securing the opposed free ends of each of the cords to the face guard bar on opposite sides of the center portion thereof.

4. A protective mouthpiece to prevent involuntary and forceful closing of the lower and upper sets of teeth of an athlete wearing a headgear having a face guard bar fixed thereon comprising a mouth insert made of a one-piece resilient material and having a U-shaped bottom wall adapted for interposition between the upper and lower sets of teeth, an arched wall joined to the posterior edge of the bottom wall, and a curved wall joined to the anterior edge of the said bottom wall, said arched and curved walls adapted to embrace the front teeth and gums of one set of teeth, the curved wall terminating anteriorly of the bottom wall at the sides thereof, a hole formed through the bottom wall at each side thereof, a flexible, longitudinally extensible cord having its central portion extending through each hole, and means for securing the opposed free ends of each of the cords to the face guard bar on opposite sides of the center portion thereof, with said cords being adapted to suspend the insert from the bar when the mouth insert is not used, said cords being of a length to be placed under tension when the insert is in position in the athlete's mouth.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,058,462

October 16, 1962

Louis L. Greenblum

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 3, line 19, after "teeth" insert a comma; line 24, for "core" read -- cord --; column 4, line 22, for "purbed" read -- curved --.

Signed and sealed this 19th day of March 1963.

(SEAL)

Attest:

ESTON G. JOHNSON
Attesting Officer

DAVID L. LADD
Commissioner of Patents