

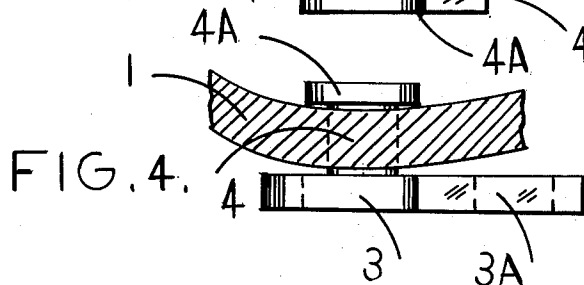
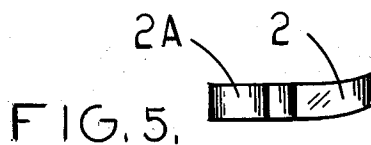
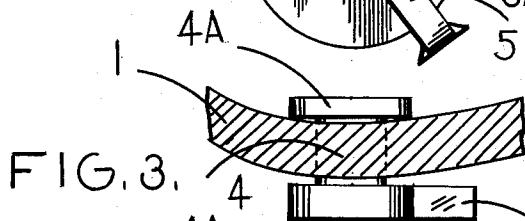
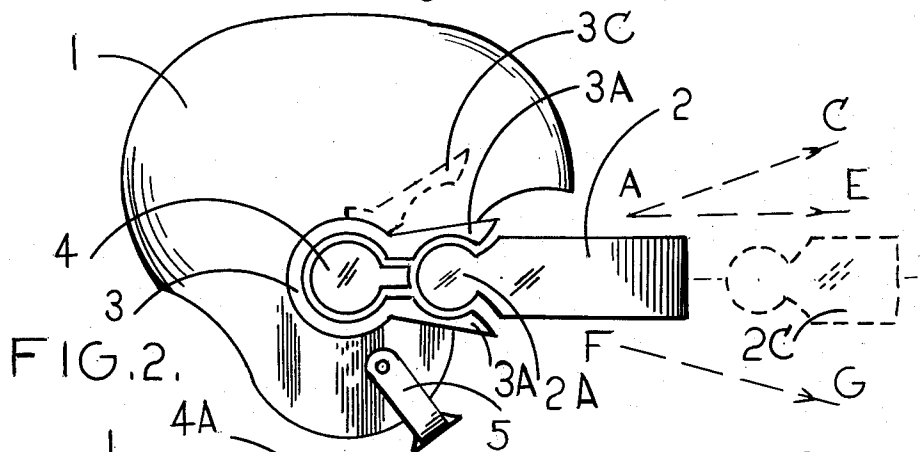
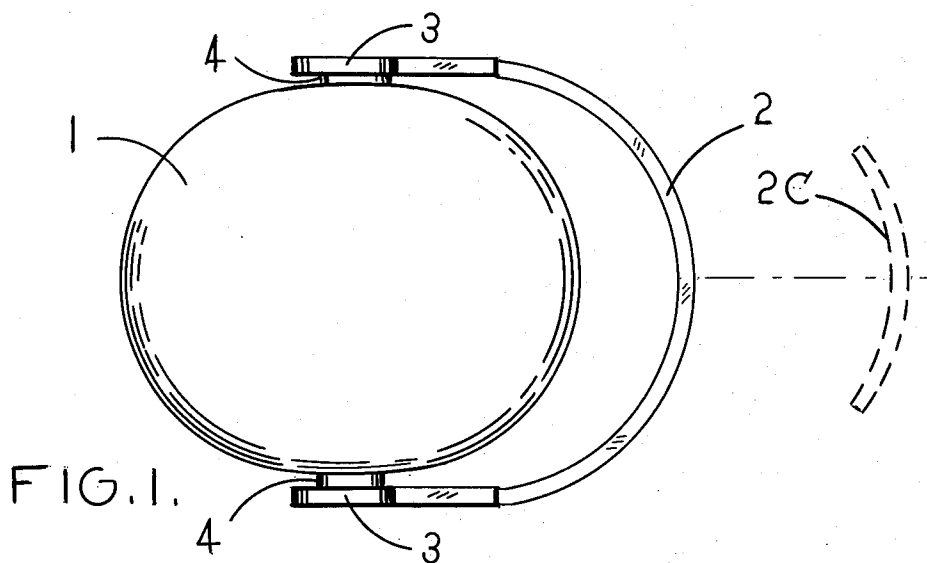
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A. P. ROZZI, SR

2,986,739

FOOTBALL HELMET FACE GUARD

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INVENTOR.
Albert Paul Rozzi, Sr.
BY

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2,986,739

FOOTBALL HELMET FACE GUARD

Albert Paul Rozzi, Sr., 1122 Nantasket Ave., Hull, Mass.

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7 Claims. (Cl. 2-9)

This invention relates to a football helmet and particularly to the face guard; and has as one of its major objects to provide a face guard that separates from the helmet when a predetermined force is applied to the face guard in a direction substantially away from the helmet.

Another object of this invention is to provide a spring clip securement between the helmet and the face guard such that the spring clip yields the face guard when a predetermined force is applied to the face guard in a direction substantially away from the helmet.

The face guard of a modern helmet has been found to be very desirable in that it is both practical in actual use and protects the face of the wearer from injuries that might be very severe; however, a great disadvantage of such face guards is their permanent securement to the helmet whereby an opposing player may tackle by the guard and throw his opponent to the ground.

Thus, players have been known to be tackled by the face guard, which offers itself almost like a handle, and thrown in a helpless way to the ground, often resulting in severe injury to the neck and back, and frequently resulting in a broken neck.

According to my present invention, the face guard separates from the helmet when a pre-determined force of approximately four pounds is applied to the face guard in a direction substantially away from the helmet; whereby a player tackled by the face guard frees himself from being thrown to the ground.

In the accompanying drawing:

FIG. 1 is a plan view of the helmet and the face guard.

FIG. 2 is a side elevation view of the helmet and the face guard, and the means for separating the face guard from the helmet.

FIG. 3 is a partial plan view in section of the helmet and stud for securing the spring clip to the helmet.

FIG. 4 is a partial plan view in section of the spring clip secured to the helmet.

FIG. 5 is a plan view of the terminal end of the face guard.

Now, referring to FIG. 1 is shown a helmet for personal wear, made preferably of plastic, the said helmet 1 being made in the usual way. Again is shown a spring clip 3, made preferably of steel and secured to the said helmet by a stud 4 made preferably of steel; a said spring clip and stud being at both sides of the said helmet and co-operating to secure a face guard 2, made preferably of a rigid transparent plastic, to the said helmet; the said face guard having a general U-shape and terminal ends straddling the helmet and engaged in the said spring clips.

Now further in FIG. 1 is shown the position, in dotted lines, of the face guard 2C when separated from the helmet.

Now in FIG. 2 is shown the helmet 1 with the usual chin strap 5 in the usual position; and is shown the face guard 2 with one of two terminal ends 2A straddling the said helmet; the said terminal ends being substantially cylindrical. Further is shown the spring clip 3 made preferably of strong spring steel and in a general U-shape and having a pair of co-operating spring arms 3A, 3A; the said spring arms having partial circular indentations co-operating to engage and secure the said cylindrical terminal ends 2A of the face guard. Further is shown the said stud 4 securing the spring clip 3 to the helmet 1; the said stud having a forward projection adapted to stop the said face guard from moving in a direction toward the helmet.

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Further in FIG. 2 is shown the position of the face guard in dotted lines at 2C when the face guard is separated from the helmet by a pre-determined force applied to the said face guard in a direction substantially away from the said helmet. Thus, a pre-determined force directly away from the helmet as shown in dotted lines A-E; or, an upward force of pre-determined strength in the direction shown by the dotted lines A-C; or, a downward pre-determined force as shown in the direction of the dotted lines F-G; will separate the face guard from the helmet.

Further in FIG. 2 is shown in exaggerated position one of the co-operating arms of the said spring clip sprung to the position shown in dotted lines at 3C when a pre-determined force is applied to the said face guard 2 in a direction substantially away from the said helmet; whereby the face guard is separated from the helmet.

Now in FIG. 3 is shown in partial plan view in section, the means for securing the said spring clip to the helmet; and in which figure is shown the helmet 1, the stud 4 passing through the said helmet and having double heads 4A, 4A, the said stud being secured against turning relative to the helmet by pressure of the two said stud heads against the helmet. Now further is shown a forward projection 4E on the outside stud head 4A, the said projection being adapted to stop the terminal end 2A of the face guard shown in FIG. 2 from moving inward toward the helmet.

In FIG. 4 is shown in partial plan view in section, the spring clip being secured to the helmet; and in which figure is shown the helmet 1, the stud 4 passing through the said helmet, the inside stud head 4A and the said spring clip 3 mounted on the outside stud head 4A of FIG. 3 and secured thereto by spring tension and by an additional stud head (not shown); the said spring arm 3A being adapted to secure and hold the terminal end 2A of the said face guard of FIG. 2 in a normally horizontal position by spring tension.

FIG. 5 is a plan view of one of the two terminal ends of the face guard; and in which figure is shown the face guard 2 and the terminal end of the face guard 2A; the said terminal end being substantially cylindrical and being adapted to engage the said spring arms 3A, 3A of FIG. 2.

According to my invention, and referring to FIG. 2, the spring clip 3 is adapted to yield and separate the face guard 2 when a force of pre-determined strength and of approximately four pounds is applied to the face guard in a direction substantially away from the helmet, such that the face guard is separated from the helmet.

Conversely, it can be seen that when the face guard is separated from the helmet, a force of approximately four pounds applied to the said face guard, and in a direction toward the helmet, will re-set the face guard and the helmet together.

I have found that my new face guard is exceedingly simple in construction, has few parts to get out of order, and is always positive in action; moreover, a player tackled by this face guard is no longer helpless and subject to be thrown to the ground in an un-controllable manner.

I have found that a player, tackled by my new face guard is almost instantaneously released when the face guard separates from the helmet, and, the force of approximately four pounds needed to separate the face guard is almost negligible in impeding the progress of the player wearing the guard.

I am aware that face guards or visors on helmets for personal wear have been known for a long time; and that such face guards or visors have been adapted to be raised or lowered relative to the helmet. I therefore am not concerned with this construction.

I am aware that prior to my invention, certain construction for securing the face guard to the helmet have

been known, as for example, the construction shown in U.S. Patent No. 2,785,405, to Snyder. I therefore am not concerned with this construction.

Obviously I do not wish to be limited to the exact details of construction as herein described and shown, as these may be varied within the limits of the appended claims without departing from the spirit and scope of my invention.

I claim:

1. In combination, a helmet for personal wear, a face guard comprising a rigid U-shaped element extending around the front of the helmet and having terminal ends straddling said helmet, said terminal ends substantially defining a pair of cylindrical elements, a pair of spring clips secured to opposing sides of said helmet, each of said spring clips having a U-shaped form and having a pair of co-operating spring arms, said spring arms having partial semi-circular co-operating indentations on their adjacent inner faces adapted to receive and hold said terminal ends of said face guard, said spring arms also having means to prevent said guard from rotating about said indentations with said spring arms adapted to release said face guard when a pre-determined force is applied to said face guard in a direction away from said helmet.

2. In a combination of a helmet and a U-shaped face guard having a pair of terminal ends, means for securing said face guard to said helmet, comprising; a pair of studs secured to said helmet and extending outwardly thereof and terminating at their outer ends in an enlarged head; a pair of spring clips positioned outside of said helmet and having loops means interengaging said heads and clips, said clips having a pair of parallel forwardly projecting spring arms tensioned toward one another with facing semicircular indentations formed on the inner surfaces of said arms, each of said terminal ends of said face guard having a cylindrical element positioned and engaged by said indentations, whereby said face guard is limited in rotational movement and is adapted to separate from said helmet when a predetermined force of sufficient magnitude to spread said arms and overcome the tension thereon, is applied to said face guard in a direction away from said helmet.

3. In a combination of a helmet and a U-shaped face guard having a pair of terminal ends, with a cylindrical element formed at each end means for securing said face guard to said helmet, comprising; a pair of studs secured to said helmet and extending outwardly thereof and terminating at their outer ends in an enlarged head; a pair of spring clips having pairs of oppositely forwardly projecting arms connected and tensioned toward one another by a bight section, said clips positioned outside of said helmet with said bight sections removeably engaging said heads, and said arms each having facing semi-circular indentations formed on the inner surfaces of said arms and extending about and removeably engaging one of said cylindrical elements of said face guard, whereby said face guard is limited in rotational movement and is adapted to separate from said helmet when a predetermined force, of sufficient magnitude to spread said arms and overcome the tension thereon, is applied to said face guard in a direction away from said helmet.

4. In a combination of a helmet and a U-shaped face guard having a pair of terminal ends with a cylindrical element formed at each end and extending around the front of said helmet, means for removeably securing said face guard to said helmet, comprising; a pair of studs secured to said helmet and extending outwardly thereof and terminating at their outer ends in enlarged heads; a

pair of spring clips positioned outside of said helmet formed of forwardly extending, facing, resilient arms interconnected by a bight section having an inner surface at least partially conforming to said head with said surface engaging said head and with said arms each having facing semi-circular indentations formed on the inner surfaces of said arms and resiliently engaging one of said cylindrical elements of said face guard, said terminal ends extending rearwardly between said arms toward said bight.

5. In a combination of a helmet, a U-shaped face guard having a pair of terminal ends with a cylindrical element formed at each end and extending around the front of said helmet, means for removeably securing said face guard to said helmet, comprising; a pair of studs, secured to said helmet extending outwardly thereof, and terminating at their outer ends in enlarged heads having projections extending forwardly therefrom; a pair of spring clips positioned outside of said helmet formed of forwardly extending, facing, resilient arms each having facing semi-circular indentations formed on the inner surfaces of said arms and interconnected in a bight section having an inner surface at least partially conforming to said heads with said surface engaging said heads and projections, said cylindrical elements of said terminal ends of said face guard projecting rearwardly between and being resiliently interengaged with said arms.

6. In the combination of a helmet and a U-shaped face guard having a pair of terminal ends and extending around the front of said helmet, means for securing said face guard to said helmet, comprising; a pair of studs secured to said helmet extending outwardly thereof, and terminating at their outer ends in an enlarged cylindrical head having a radial projection extending forwardly therefrom; a pair of spring clips positioned outside of said helmet formed of facing, forwardly projecting, resilient arms, interconnected at their rear ends in a bight section having an inner surface in part engaging and conforming to the said head and projections, said face guard having ends formed as a substantially cylindrical projection with said cylindrical projection projecting between and resiliently interengaged with said arms, said arms having inwardly facing surfaces conforming with and engaging the cylindrical surface of said projection, whereby said face guard is limited in rotational movement and may be disengaged only upon application of a predetermined force in a forward direction away from said helmet.

7. In combination a helmet having opposite depending side portions adapted to lie flat against and protect the wearer's ears and a face guard, comprising; a rigid U-shaped element having a pair of terminal ends with a cylindrical element formed at each end and straddling said helmet on the outer side of said portions; releasing clip means secured to the outer side of said portions, said clip means having arms with each arm having facing semi-circular indentations formed on the inner surfaces of said arms and engaging said cylindrical elements of said terminal ends and being adapted to limit rotation of said face guard and to permit separation of said face guard from said helmet only when a predetermined force is applied to said face guard in a direction away from said helmet.

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