Jan. 4, 1955 R. D. DAVIA 2,698,434

BASEBALL CAP

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Fig. 1.

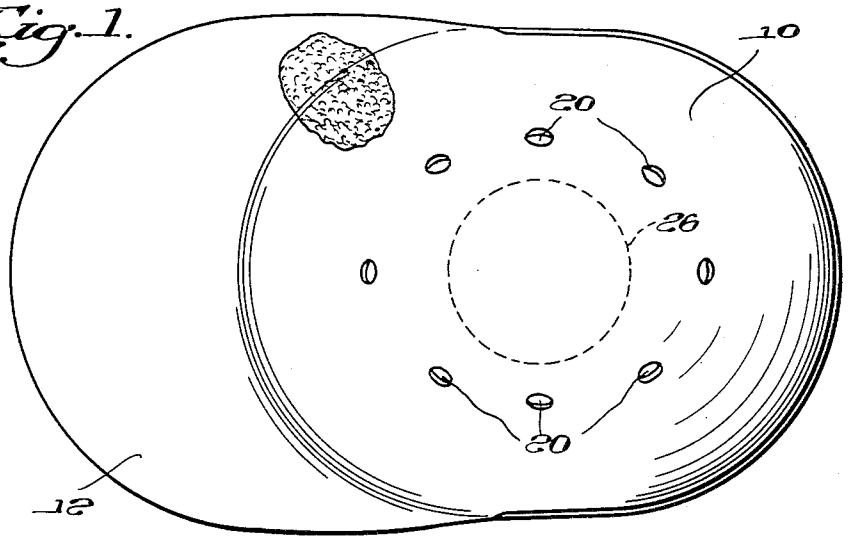
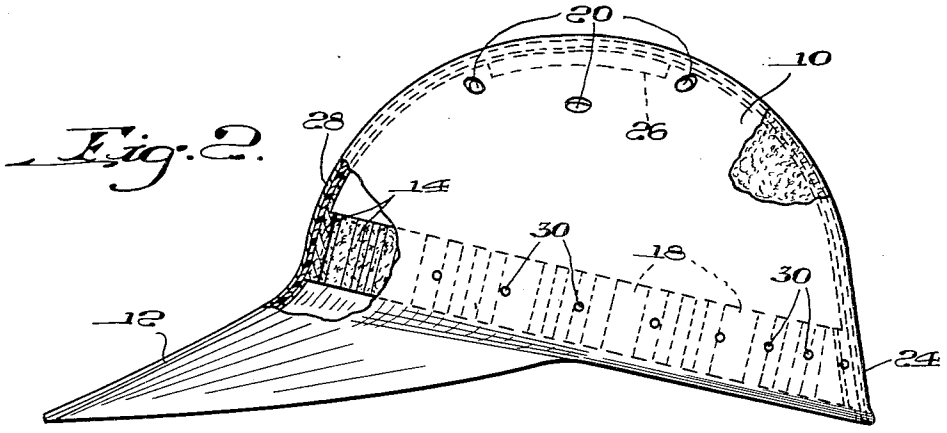


Fig. 2.



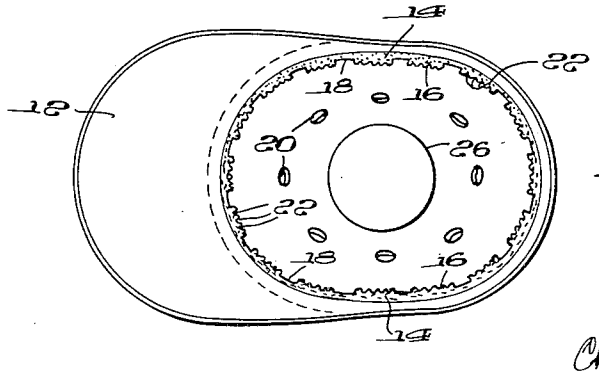


Fig. 3.

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BASEBALL CAP

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2 Claims. (Cl. 2—3)

This invention relates to caps, and is for a cap to be used by those participating in sports where there is a likelihood of head injury, but where adherence to traditional dress prevents the use of protective helmets. The invention is designed to provide a protective cap suitable for wear in such games as baseball, hockey and polo, where a cap is traditional, and a long peak is helpful. My invention will be hereinafter particularly referred to in connection with baseball caps, but this is by way of explanation, and not of exclusion.

Traditionally the costume of a baseball player includes a cap having a long visor or peak intended to shade the eyes. Such caps are of cloth, and the peak is formed of cloth with a light form of some kind to give it stiffness. Neither the body of the cap nor the peak afford any degree of protection to injury from a baseball, bat, or other object.

To protect themselves from injury, players sometimes have two caps, one which they use at bat and which contains a hard protector, but which is generally uncomfortable. Not infrequently a player will change from this cap to a conventional one. When this is done, there is no protection from a pitched ball that may overtake a player running the base-line, a not unusual incident. Certain players, having once been hit, have been observed trying to protect with one hand the back of the head while running from third base to home plate.

The present invention has for its objects to provide a cap which, while conforming in appearance to the conventional and traditional cap, is constructed so that both the crown and the peak will protect the wearer, and which nevertheless will be light and comfortable.

With these and other objects in view, the invention consists in the improved safety cap hereinafter described and particularly defined in the appended claims.

The various features of the invention are illustrated in the accompanying drawings, in which:

Fig. 1 is a top plan view of a baseball cap embodying the preferred form of the invention;

Fig. 2 is a view in side elevation with parts in section of the cap shown in Fig. 1; and

Fig. 3 is a bottom plan view of the cap showing the mounting of the sweat band and top cushion on the inside of the crown.

In the drawings, the cap has a crown **10** and a large, long, integral peak projecting downwardly and forwardly therefrom. Viewed from above, as in Fig. 1, the overall contour is ovular, while viewed from the side, as in Fig. 2, the edge of the peak intersects the edge of the crown about midway between the front and back of the crown, forming a wide obtuse angle therewith. The tip of the peak and the rear edge of the crown are thus in a line which is at an angle to the bottom edge of the crown when the cap is viewed in side elevation. While the portion of the crown forwardly of the peak is generally shaped like a quarter of a sphere, the part of the crown back of this point departs from spherical form so that the back part is straight in the region of the reference numeral **24**. While, as stated, the general shape of the cap when viewed from the top is ovular, the cap is slightly wider across the peak immediately in front of the crown than the diameter of the crown, so that viewed in plan, the sides of the peak converge slightly to the point of juncture with the crown.

The cap so described is of a rigid construction, being formed of plastic, or plastic and reinforcing material. For

professional use, I prefer to make the cap from either glass cloth or matted glass fibers impregnated with a polyester resin and cured. This combines lightness of weight, high impact resistance, and ease of production. It will readily resist an impact of forty to fifty pounds per square inch, even though it is thin enough to be comfortably light. Less expensive caps can be integrally molded, using so-called plastic substances with or without fillers. For example, caps suitable for juvenile use may be injection molded from cellulose acetate or cellulose acetate butyrate. These are merely typical of available plastic substances, and not exclusive.

Secured to the inside rim of the crown is a resilient foam or sponge rubber band which is relatively thick, i. e., it is substantially thicker than the walls of the cap. It may be secured in place in various ways. For example, it may be cemented in by conventional adhesives available for the purpose. It can be pulled loose and replaced by another when it becomes soiled.

The band has several functions. First, it acts to absorb and distribute the force of any blow that is received. Secondly, it enables the cap to cling tightly but comfortably to the player's head, and thirdly, it enables one size of cap to be worn over a range of head sizes and with various head shapes, so that a wide assortment of sizes for either children or adults is not required.

As here shown, the sweat band is made of a resilient foam rubber by molding, and has a series of outward projections **16** which are spaced apart and are distributed entirely around the inside of the band. Between the projections **16** are depressions **18** which have a depth sufficient that when the cap is being worn, an opening will be formed between the head and the inside of the depression which will permit air to circulate along the head up into the crown. A series of ventilation openings **20** are formed near the top of the crown to permit a good circulation of air through the cap. The projecting portions **16** have corrugations **22** which are effective in making a clinging fit of the cap on the head without excessive compression of the rubber, and thus allow the cap to be securely held on the head for the active movement of an athlete. The construction of the band causes the cap to cling tenaciously to the head. In addition to the head band, a cushion **26** of similar resilient sponge rubber is secured in the inside of the top of the crown.

The cap normally fits quite low on the head so that the back end **24** of the crown covers the back of the head and neck to protect the wearer from a blow which might be received on the back of the cap. The sponge rubber sweat band which is quite thick, is very effective in absorbing the shock of a blow against the outside of the cap.

Baseball, hockey and polo caps of this type are generally worn in the warmer weather, and it is important to have them comfortable. To help provide a further ventilation for the cap, a series of holes **30** extend through the crown behind the sweat band **14**, which permit air to penetrate into the inside of the crown through the holes and porous sweat band. Entrance of air through the sweat band, as well as through the depressions **18** in the sweat band, provides a comfortable cap.

Molded plastic objects, such as this cap, have a high reflectivity to light, and while this is not too objectionable in some sports, in others such as baseball, it is very objectionable when played either in the bright sun or under field lights at night. In order to kill the glare of reflected light and overcome the professional player's objection to the "feel" of the cap due to its very smooth surface, a waterproof adhesive is sprayed over the cap inside and out before the sweat band and pad are put in, and before the adhesive dries, short wool flock or other short fibers are sprinkled over the coated surfaces and adhere thereto. This flock may be colored or dyed to meet the uniform requirements of a team. The surface thus formed not only looks much like flannel, but is of low light reflectivity and has a good feel to the player when he typically pulls the peak of his cap while playing.

The rigid one-piece construction provides a wide source of protection to the player. In the first place the rounded crown and peak serve to deflect a ball so that it glances

away in most cases instead of being stopped dead, as is the case with a helmet or as is likely to be the case with an unprotected head. The peak cannot move or deflect if it receives the impact so that the peak provides a large measure of protection to the face. The shape of the peak, with converging sides, protects the temples of the wearer. This is also an advantage in having the peak merge into the crown well back of the temples.

If in close play a hat is knocked off or thrown to the ground, the crown and the peak strengthen and reinforce each other so that the cap will not be damaged if tramped upon, or if a player falls upon it.

The cap construction outlined above is very effective in protecting baseball players or those participating in other games from blows of a kind which have been a source of injury of many players.

The preferred form of the invention having been thus described, what is claimed as new is:

1. A protective sports cap comprising a one piece rigid crown with an integral rigid, comparatively long, forwardly and downwardly projecting peak, the edges of the peak intersecting the edges of the crown at a point about midway between the front and back of the crown and forming an obtuse angle approaching a straight angle to a projected line of the bottom of the crown, the overall contour of the entire cap when viewed in a plan being distinctly elliptical, the cap being comprised of a molded rigid plastic composition, and a resilient porous sponge rubber head band secured to the interior of the crown near the bottom thereof which is thicker than the walls of the cap.

2. The cap defined in claim 1 in which the peak flares outwardly and downwardly at the sides to protect the temples of the wearer, the back of the crown being projected straight downwardly a substantial distance from the normal semi-circular curvature of the crown to protect the back of the head and the neck of the wearer, and a sponge rubber cushion is mounted on the inside at the top of the crown and the back of the neck to absorb shock of blows imparted to the crown and the back of the cap.

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