July 10, 1962 E. MAURO ET AL 3,042,927

HELMET

Filed March 24, 1959

Fig. 1

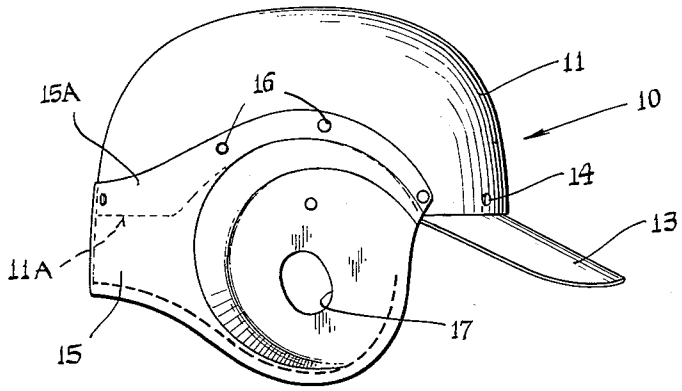


Fig. 2

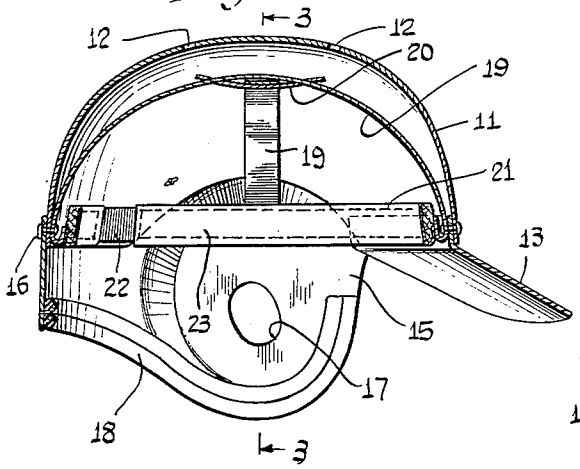
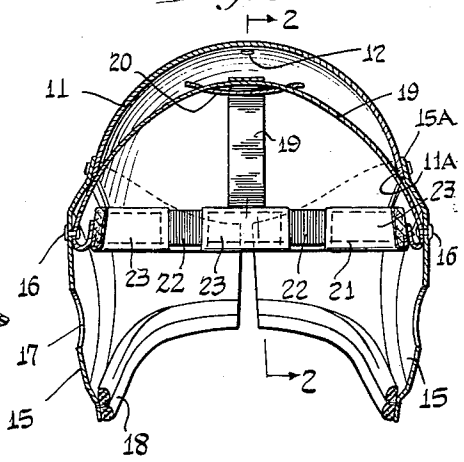


Fig. 3



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HELMET

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This invention relates to a protective head gear, and more specifically to a helmet adapted for use by persons engaged in any sports wherein the head is exposed to potential injury.

In team sports, as for example, baseball, wherein a protective head gear is generally worn by the batter, it is customary for one helmet to be used by different batters. It frequently occurs that only one helmet is generally used by the entire team. As the helmets heretofore known were of a definite fixed, average size, the team helmet would not properly fit every player's head. Thus many players were not properly protected. Further, if the helmet did not properly fit, it was of little or no use to the wearer.

An object of this invention is to provide a team helmet which will conform to the size of the head of virtually any wearer.

Another object is to provide a helmet which is self-adjusting in fitting the size of the head of each user.

Still another object of the present invention is to provide a helmet which while usable by various persons nevertheless affords protection to each in the vulnerable areas.

A feature of this invention resides in the provision of an improved helmet which is relatively simple in construction, positive in operation, durable and inexpensive to manufacture.

Other features and advantages will be readily apparent when considered in view of the drawings and description in which:

FIG. 1 is a side elevation view of the improved helmet in accordance with this invention.

FIG. 2 is a side sectional view taken along line 2—2 of FIG. 3.

FIG. 3 is a sectional view taken along line 3—3 of FIG. 2.

Referring to the drawings, there is illustrated in accordance with this invention a helmet **10** which is readily adapted to be used for baseball or other sport games in which a player's head is exposed to danger. Accordingly the helmet **10** consists of a substantially imperforate shell **11**, provided only with a few vent openings **12**. The shell is formed of a suitable stiff, hard material capable of withstanding the blow of a pitched baseball or other impact or shock. Plastic or laminated plastic, fiber glass, or other similar readily moldable material is preferably used in forming the shell, although it will be realized that any durable shock-resistant material may be utilized. A visor **13** is connected to the front peripheral portion of the shell **11** and extends forwardly as shown in FIGS. 1 and 2. Generally, the visor **13** would be formed of the same material as the shell and joined thereto by suitable fasteners **14**, such as rivets or the like.

A depending shield **15** is connected to the side and rear peripherical portions of the shell **11**. Specifically, as provided by the present invention, the upper marginal edge portions **15A** of the shield **15** overlap the lower peripheral portion **11A** of the shell **11**. The shield is secured, as shown, by suitable fastening means **16**, as for example, by rivets. The structure resulting from overlaying the marginal edge portions **11A**, **15A** of the shell and shield, respectively, provides a reinforcing area or strips which extends around the temporal and back of the head regions. Thus, according to this invention, the most vulnerable areas of the head are afforded added protection.

While the shield **15** may consist of a unitary wrap around piece, in the illustrative embodiment, the shield is formed of two identical pieces joined together. Accordingly, as shown, the shield **15** is preferably shaped so as to protect the entire ear. An aperture **17** in the shield **15** opposite the wearer's ear is provided to facilitate hearing. In addition, and as additional protection, a suitable padding or cushion material **18** is disposed around the lower peripheral portion of the shield **15**.

In order to maintain the helmet **10** in spaced relationship to the wearer's head and so as to prevent contact with the shell **11**, a pair of crossed radial straps or bands **19** is provided. These bands may be formed of canvas or other suitable material. As shown the opposed end portions of each band are secured to opposed peripherical portions of the shell **11** and traverse an arc which is less than that of the shell. A center piece **20** maintains the straps **19** radially spaced.

A sweat band **21** is connected to the opposed end portions of each radial strap **19** with the end portions of the straps being inwardly turned, as seen in FIGS. 2 and 3, to space the sweat band from the shell. According to this invention the band **21** is self-adjusting in size so that any size or shape head may be properly accommodated by the helmet **10**. This result is attained by forming at least a part of the sweat band of an elastic material which can be readily stretched to conform to the contour and size of the user's head. In the illustrative disclosure, the sweat band **21** is formed of joined segments **22** and **23** of elastic and non-elastic material respectively. Therefore, the sweat band forms, in effect, an expandible ring adapted to conform to the size and shape of the wearer's head.

Referring specifically to FIGS. 2 and 3 it will be noted that the non-elastic segments **23** of the sweat band **21**, formed of canvas or other suitable non-elastic material, are positioned adjacent the inwardly turned ends of the radial bands **19** and are connected thereto. The elastic segments **22** of the sweat band **21** are disposed between adjacent non-elastic segments **23** to connect the corresponding ends thereof, joining the segment into a ring.

The sweat band **21** will contact the head, as the helmet is pulled down thereon, and being self-adjusting as hereinbefore described conforms to the size and shape of the head of the user. When the top of the head contacts the center piece **20**, tension is applied, pulling the straps or bands **19** taut. Thus the helmet is squarely and snugly fitted to any size head, with the helmet always being properly spaced from the wearer's head. Therefore, according to this invention there can be no direct contact through the helmet to the head when the helmet is the subject of an impact or blow.

This advantageous result is attained despite the differences in the various sizes or shapes of the heads of the users of the helmet.

It will be understood that while the invention has been described in some detail, variations and modifications may be made without departing from the spirit of the invention or the scope of the appended claim.

We claim:

A protective head gear comprising a unitary shock absorbent, full, outer shell adapted to cover one's head, a sun visor connected to the front peripheral portion of said shell for shading one's eyes, a depending ear and neck shield connected to the side and back peripheral portion of said shell and being formed with a cleft in the region of the back of the neck portion thereof, said shield and shell having overlying peripheral marginal portions along their line of contact, said overlying marginal portions forming a reinforcing strip around the back and temporal regions of said shell, means disposed within the

shell for spacing the shell from one's head when it is worn; said means including at least two transversely extending radial bands connected to opposite peripheral portions of said shell, said bands having the end portion thereof inwardly turned, and a self-adjusting sweat band connected to the end portions of said bands, said sweat band comprising alternate elastic and substantially inelastic portions connected end to end, said inwardly turned end portions being connected to said inelastic portions of said sweat band and spacing said sweat band from said shell, and said shield being separable at said cleft for

lateral spreading of the sides of the shield without bending.

References Cited in the file of this patent

UNITED STATES PATENTS

1,194,193	Kronthal	Aug. 8, 1916
1,663,124	Fischer	Mar. 20, 1928
1,864,104	Till	June 21, 1932
1,973,594	Wolf	Sept. 11, 1934
2,855,605	Aileo	Oct. 14, 1958
2,960,697	Segan	Nov. 22, 1960