

12 **EUROPEAN PATENT APPLICATION**

21 Application number: **81201406.6**

51 Int. Cl.³: **A 42 B 1/12**

22 Date of filing: **31.12.81**

30 Priority: **15.01.81 IT 2048281 U**

43 Date of publication of application:
04.08.82 Bulletin 82/31

84 Designated Contracting States:
AT BE CH DE FR GB LI LU NL SE

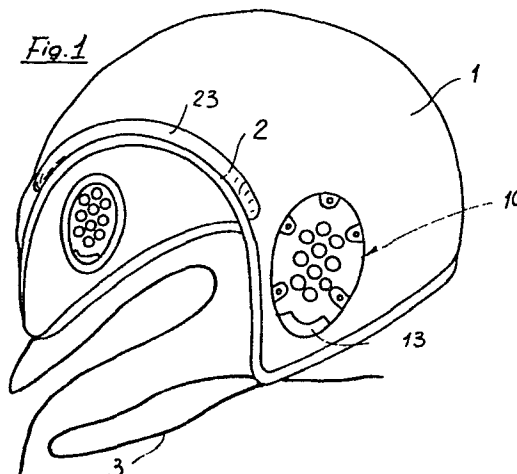
71 Applicant: **RUE ROYALE DIANA S.p.A.**
Via Statale, 24
I-22055 Merate (Como)(IT)

72 Inventor: **Bechis, Michele**
Via Statale, 24
I-22055 Merate (Como)(IT)

74 Representative: **Cicogna, Franco**
Ufficio Internazionale Brevetti Dott.Prof. Franco Cicogna
Via Visconti di Modrone, 14/A
I-20122 - Milano(IT)

54 **Cap, provided with protecting members, particularly for water-polo players.**

57 The cap comprises a semielastic material body (1), effective to fit the shape of the player head and provided, at the front portion thereof, with a protecting insert (23), bowl shaped members (10) being further provided at the pavilion portions, which are substantially rigid and provided with through openings.



-2-

BACKGROUND OF THE INVENTION

The present invention relates to a cap, provided with protecting members, particularly for water-polo players.

As it is known the water-polo players have to wear, for rule, during a game, a cap of different colour from that of the competing team, thereon a number is printed effective to mark the player.

Presently the thereinabove mentioned cups are generally made of a very thin fabric and, accordingly, they are not effective to suitably protect the player.

More specifically a lot of the head parts of the player are exposed and susceptible to impacts and the like.

It is also known that a very delicate zone is that of the pavilion, both because impacts and the like, and because water sprays can cause dangerous obstructions of the ears.

Another delicate zone is that of the orbital arches which, upon impact, are easily susceptible to painful and dangerous wounds.

Yet another drawback of the known caps is that said caps, being rather rigid, are to be made

-3-

in a lot of size, in such a way as to be able of fitting to the different size and shapes of the heads of the players.

SUMMARY OF THE INVENTION

Thus, the task of the present invention is to eliminate the thereinabove mentioned drawbacks, by providing a cup with protecting members which is effective to suitably protect both the pavilion region and the orbital arches, without hindering in any way the normal playing procedure.

Within the scope of the thereinabove mentioned task, a main object of the present invention is to provide a cap which is effective to perfectly fit to the head of the player, in such a way as to perfectly adhere thereto.

Yet another object of the present invention is to remarkably reduce the cap making steps, and, more specifically, to eliminate all types of seams during the cap shaping step.

Yet another object of the present invention is to provide a cap, including protecting members, which may be easily and quickly produced starting from easily available materials and elements and which, moreover, is of very reduced cost.

The thereinabove mentioned task and objects, as well as yet other objects which will become more apparent hereinafter, are achieved by a cap provided with protecting members, particularly for water-polo players, characterized in that it comprises a semielastic material body, effective to fit to the shape of the player head and provided, at the front portion thereof, with a protecting insert, bowl shaped members being further provided at the pavilion portions, said members being substantially rigid and provided with through openings.

BRIEF DESCRIPTION OF THE DRAWINGS

Further characteristics and advantages will become more apparent hereinafter by the following detailed description of a cap provided with protecting members, particularly for water-polo players, being illustrated by way of an indicative and not limitative example in the accompanying drawings, where:

fig.1 is a perspective schematic view illustrating the cap according to the present invention;

fig.2 is a cross-section view illustrating

the zone thereat the bowl-shaped members are provided;and

fig.3 is an exploded perspective view illustrating the bowl-shaped members and the fixing means therefor;

DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the aforesaid figures, the cap according to the present invention comprises a body 1, having the main feature of being made of a semielastic material, free of any seams, and of being produced by means of a hot molding process effective to impart thereto the conventional shape of a cap while affording the possibility of a perfect fitting to the different size and shapes of the player heads.

This characteristic is a very important one, since it does not require time consuming and expensive operations for seaming and shaping the cap.

Moreover for satisfying all of the needs it is not necessary to provide for the making of a lot of different sizes.

-6-

At the edges of the body 1 there is seamed, as it is conventional, a band 2 extending with fixing cords 3.

At the zone or region of the pavilions, the body 1 is provided with protecting members, consisting of bowl-shaped members 10, substantially rigid, acting to protect the pavilions from possible impacts among players.

Those same bowl-shaped members 10 are moreover effective to suitably protect the player ears from water splashes, which would obstruct the pavilions.

Said protecting members 10 are provided with a bowl shaped portion 11, ending with a peripheric flange 12.

The bowl shaped portion 11 is provided, at the intermediate portion whereof, with through holes, in such a way as not to hinder the hearing capabilities of the player and, at the lower portion thereof, it is provided with a discharging port 13, effective to prevent undesired water stagnations from occurring in the inside of said bowl shaped portion.

In order to couple the bowl shaped members 10

-7-

there is provided a counterflange 20, which is located in the inside of the body 1, at an opening formed on said body 1, and which is provided with pins 21 effective to be inserted into corresponding seats 22 as formed on said flange 12.

In this manner, a firm coupling of the bowl shaped member 10 to the cap is obtained and made a stable one by means of hot riveting, or the like method, of the projecting portions of the pins 21, upon having inserted said pins into their seats 22.

This type of coupling, moreover, affords the possibility of not stretching the semielastic material or fabric forming said body 1, and it does not require time consuming and expensive operations for applying the bowl shaped member.

In order to suitably protect also the eyebrow arches, at the front portion of the edge of the body 1 there is advantageously applied a gasket 23, preferably consisting of a closed cell rubber trim or profiled member, or made of any other suitable resilient materials, of suitable thickness.

The thus realized cap can be used as any other conventional caps as employed by the water polo players, with the great advantage of presenting

a perfect adhesion to the head of the player, since the cap is made of elastic or resilient material or fabric, hot formed, and furthermore it suitably protects the pavilion regions and the eyebrow regions.

From the above description it will be apparent that the invention fully achieves the intended task and objects.

In particular the fact is to be pointed out that the cap according to the present invention, in addition to having functional or operative characteristics remarkably improved with respect to the caps of known type, offers the advantage of suitably protecting the players.

In practicing the invention the used materials, though the best results have been obtained by using the thereinabove listed materials, as well as the size and specific shapes, may be any, according to needs.

C L A I M S

- 1- A cap provided with protecting members, particularly for water-polo players, characterized in that it comprises a semielastic material body, effective to fit the shape of the player head and provided, at the front portion thereof, with a protecting insert, bowl shaped members being further provided at the pavilion portions, said members being substantially rigid and provided with through openings.
- 2- A cap provided with protecting members, particularly for water-polo players, according to the preceding claim, characterized in that said body is made by a hot molding forming process and in that said protecting insert consists of a closed cell rubber or other suitable material trim or profile, of suitable thickness.
- 3- A cap provided with protecting members, particularly for water-polo players, according to the preceding claims, characterized in that said bowl-shaped members are provided with a bowl portion, peripherally including a flange member effective to engage with a counterflange provided on the inner surface of said body .
- 4- A cap provided with protecting members,

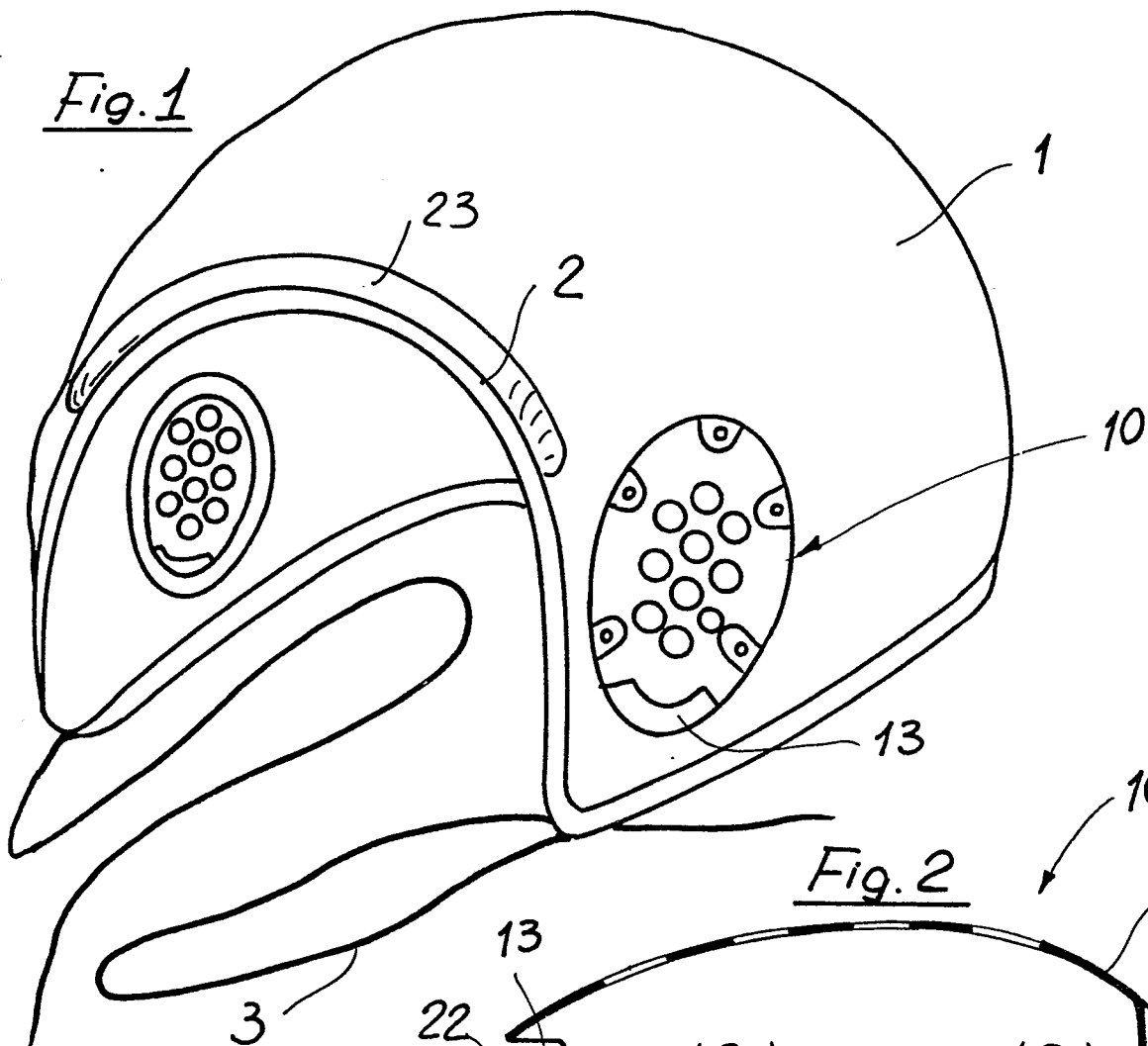
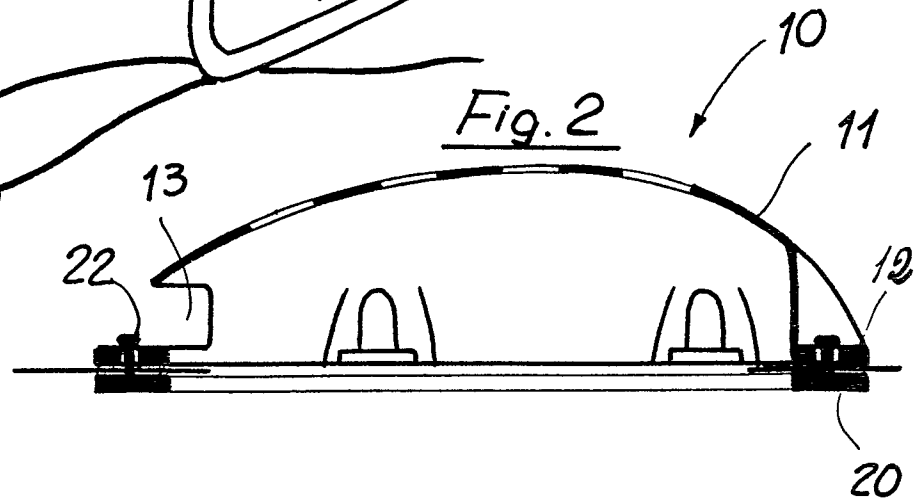
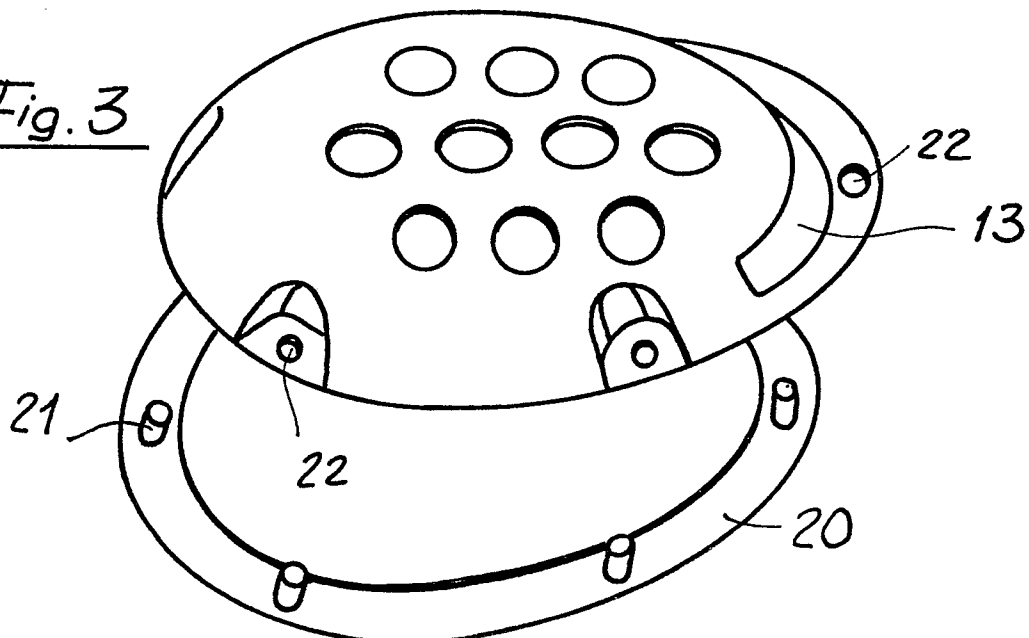
particularly for water-polo players, according to the preceding claims, characterized in that said bowl portion is provided, at the middle portion thereof, with through holes effective to provide the player with perfect hearing capabilities and, at the lower portion thereof, with a through opening effective to prevent water stagnations from forming in the inside of said bowl shaped member.

5- A cap provided with protecting members, particularly for water-polo players, according to one or more of the preceding claims, characterized in that said counterflange is provided with a plurality of projecting pins, effective to engage with corresponding seats as formed on said flange, the stable coupling or fitting of said flange and counterflange being obtained by simultaneously press riveting said pins as introduced into said seats.

6- A cap provided with protecting members, particularly for water-polo players, according to one or more of the preceding claims, characterized in that said body is free of any seamed portions.

7- A cap provided with protecting members,

particularly for water-polo players, according to
the preceding claims, and substantially as broadly
described and illustrated for the intended objects.

Fig. 1Fig. 2Fig. 3



DOCUMENTS CONSIDERED TO BE RELEVANT																											
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)																								
X	US-A-3 454 962 (HIND) *The whole document*	1,3-5, 7	A 42 B 1/12																								
A	--- US-A-3 979 777 (GREGG) *The whole document*	1,2,6, 7																									
A	--- US-A-3 588 914 (IHNAT) *The whole document*	1																									
A	--- US-A-3 628 191 (DOUGLAS) *Column 1, lines 35-37; claims; figures*	1,2,6																									
A	--- FR-A-2 250 513 (SOLIGNAC) *Page 1, lines 22-27; page 2, lines 15-22; claims 1,2,5; figure 1*	1,2,6	TECHNICAL FIELDS SEARCHED (Int. Cl. ³)																								
A	--- US-A-3 953 892 (KENNEDY et al.) *Claims; figures*	1,2,6	A 42 A 63																								
A	--- US-A-2 269 868 (SMITH) *Claims; figures*	1,2																									
A	--- US-A-2 758 304 (McGOWAN) *Column 1, lines 62-68; column 2, lines 43-51; figures*	1,2																									
The present search report has been drawn up for all claims																											
Place of search THE HAGUE		Date of completion of the search 19-04-1982	Examiner BOURSEAU A.M.																								
<table border="0"><tr><td colspan="2">CATEGORY OF CITED DOCUMENTS</td><td>T : theory or principle underlying the invention</td></tr><tr><td>X</td><td>particularly relevant if taken alone</td><td>E : earlier patent document, but published on, or</td></tr><tr><td>Y</td><td>particularly relevant if combined with another</td><td>after the filing date</td></tr><tr><td>A</td><td>document of the same category</td><td>D : document cited in the application</td></tr><tr><td>O</td><td>technological background</td><td>L : document cited for other reasons</td></tr><tr><td>P</td><td>non-written disclosure</td><td></td></tr><tr><td></td><td>intermediate document</td><td>& : member of the same patent family, corresponding</td></tr><tr><td></td><td></td><td>document</td></tr></table>				CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention	X	particularly relevant if taken alone	E : earlier patent document, but published on, or	Y	particularly relevant if combined with another	after the filing date	A	document of the same category	D : document cited in the application	O	technological background	L : document cited for other reasons	P	non-written disclosure			intermediate document	& : member of the same patent family, corresponding			document
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention																									
X	particularly relevant if taken alone	E : earlier patent document, but published on, or																									
Y	particularly relevant if combined with another	after the filing date																									
A	document of the same category	D : document cited in the application																									
O	technological background	L : document cited for other reasons																									
P	non-written disclosure																										
	intermediate document	& : member of the same patent family, corresponding																									
		document																									

DOCUMENTS CONSIDERED TO BE RELEVANT			Page 2
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 3)
A	US-A-2 878 478 (KLEINMAN) *Claims; figures*	1,2	
A	--- US-A-4 068 323 (GWON) *Claims; figures*	1,2	
A	--- US-A-1 877 411 (LOWER) *Page 1, lines 35-43; figure 1*	2	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 3)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 19-04-1982	Examiner BOURSEAU A.M.
CATEGORY OF CITED DOCUMENTS		T theory or principle underlying the invention E earlier patent document, but published on, or after the filing date D document cited in the application I document cited for other reasons & member of the same patent family, corresponding document	
X	particularly relevant if taken alone		
Y	particularly relevant if combined with another document of the same category		
A	technological background		
O	non-written disclosure		
P	intermediate document		