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(71) Applicant: **New Max S.r.l.**
15040 Mirabello Monferrato (AL) (IT)

(72) Inventors:
• **Vinaccia, Giulio**
I-15040, Mirabello Monferrato (AL) (IT)
• **Zipoli, Claudio**
I-15040, Mirabello Monferrato (AL) (IT)

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

(54) **Sports helmet for motorcyclists and other sports, including a wireless communication device, particularly for a use in a bluetooth technology or the like**

(57) A sports helmet for motorcyclists and other sports, comprises a wireless communication device, particularly for a use in a Bluetooth technology or the like, comprising an elongated body including a Bluetooth or the like apparatus, a sound diffuser and a microphone.

The elongated body has a base portion which can

be removably snap engaged in a housing seat formed in the helmet at an ear portion thereof.

The communication device can be removed and associated to an earphone or engaged in a computer or any other apparatus for recording and/or playing back sound.

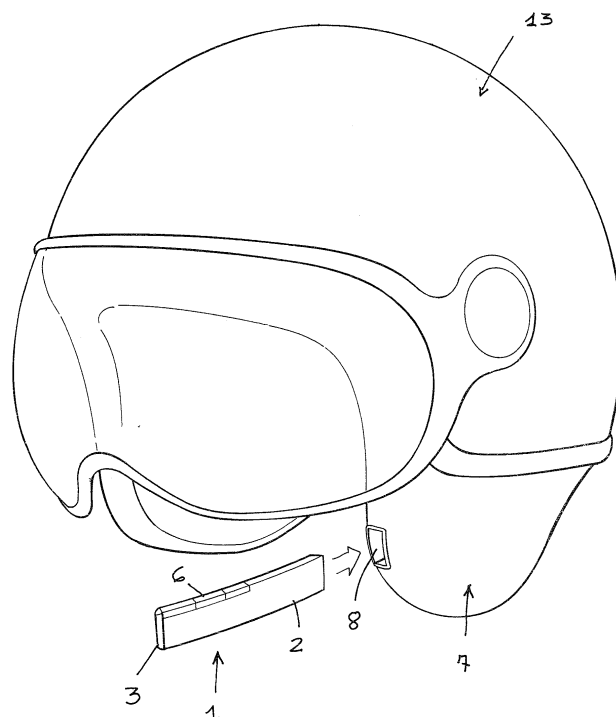


FIG. 1

Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a sports helmet for motorcyclists and other sports, including a wireless communication device, particularly for a use in a Bluetooth technology or the like, and adapted to be applied in a housing seat formed in the helmet.

[0002] As is known, a motor vehicle driver, driving a motorcycle, a car or boat, should not use a cellular phone during the driving since this is prohibited by law and is anyhow a very difficult and dangerous operation.

[0003] In particular, in a case of a motorcycle, the motorcycle driver cannot talk with the driver of another motorcycle during a journey.

[0004] Even a conversation between a motorcycle driver and passenger is difficult because of the engine and wind noise.

[0005] Also known is the fact that the so-called Bluetooth technology is encountering a continuously increasing diffusion in wireless communication devices, such as cellular phones, personal computer and other apparatus such as sound diffusion systems, and this owing to the use of a suitably designed short range communication protocol.

SUMMARY OF THE INVENTION

[0006] The aim of the present invention is to provide such a motorcyclist sports helmet including a communication device which can be used in driving the motorcycle or in any other situations in which the driver would desire to have his/her hands free.

[0007] Within the scope of the above mentioned aim, a main object of the invention is to provide such a sports helmet including a communication device operating based on the Bluetooth technology or the like.

[0008] Another object of the invention is to provide such a communication device which can be easily applied to motorcyclist helmets and which has a very small weight and size.

[0009] Another object of the present invention is to provide such a communication device which, owing to its specifically designed constructional features, is very reliable and safe in operation.

[0010] Yet another object of the present invention is to provide such a motorcycle helmet including the above communication device, which can be easily made and which, moreover, is very competitive from a mere economic standpoint.

[0011] According to one aspect of the present invention, the above mentioned aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by a sports helmet including a wireless communication device, particularly for a use in the Bluetooth technology or the like, **characterized in that** said helmet comprises an elongated body containing the

Bluetooth device or the like, a sound diffuser and a microphone.

[0012] Said elongated body has a base or bottom portion thereof which can be removably snap engaged in a seat or recess of a helmet, said seat or recess being arranged at an ear portion of the helmet.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] Further characteristics and advantages of the present invention will become more apparent hereinafter from the following detailed disclosure of a preferred, though not exclusive, embodiment of the sports helmet according to the invention, which is illustrated, by way of an indicative, but not limitative, example in the accompanying drawings, where:

Figure 1 is a perspective view showing a helmet including a seat or recess wherein the communication device according to the present invention can be housed;

Figure 2 is a view similar to figure 1, showing the helmet including the communication device according to the present invention, in a use position thereof; Figure 3 is a perspective view of the communication device according to the invention;

Figure 4 is a further perspective view of the communication device according to the invention;

Figure 5 is yet another exploded perspective view of an earphone support of the communication device according to the present invention; and

Figure 6 shows the use of the inventive device in association with a desk computer, after having removed said communication device from the helmet.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0014] With reference to the number references of the above mentioned figures, the helmet according to the invention comprises a wireless communication device, generally indicated by the reference number 1, which comprises an elongated body including a base or bottom portion 2 coupled to an end portion 3 arranged at a given angle with respect to said base portion 2.

[0015] In the base portion 2 is arranged a sound diffuser including a loudspeaker, thereat are formed a plurality of slots or openings 4 to allow sound generated by the diffuser to be diffused.

[0016] At said end portion 3 are moreover provided further openings or slots 5 for a microphone held inside the device body, which also contains therein a Bluetooth apparatus or the like.

[0017] On the device elongated body, preferably at an end portion or near an end portion thereof, control push-buttons 6 for controlling the communication device are provided.

[0018] The communication device 1 is used by engag-

ing it into a seat or recess formed in the earphone support 7 of the helmet, arranged near a user ear.

[0019] Said earphone support 7 comprises a seat or recess 8 therein is snap engaged, at least partially, the base or bottom portion 2 of the communication device, said bottom portion being so arranged and sized as to allow the diffuser slots 4 to be arranged near the ear pavilion of the user.

[0020] Figure 5 shows an exemplary embodiment of the earphone support 7 comprising, in particular, a box-like body 9, made of a thermoplastic rubber material, thereto is pivoted a swinging element 10 including the snap engagement recess 8 for the communication device 1.

[0021] As shown, the box-like body 9 is closed by a bottom or base 11 and comprises, on an opposite side thereof, a cushion element 12 for easily abutting the user ear pavilion thereagainst.

[0022] The swinging element 10 is adapted to turn or swing with respect to said box-like body 9 thereby allowing to adjust the inclination of the communication device during the use thereof.

[0023] The earphone support 7 can be associated with, or constitute an integrating part of different elements, such as a safety helmet 13 or any other head covering device.

[0024] Figure 6 shows an exemplary application of the earphone support to a small ring or loop element, like that of the conventional sound earphone.

[0025] Figure 6 shows an exemplary use of the communication device 1 according to the present invention in association with a home or office computer, both for telephonic conversations and for listening or recording music and so on.

[0026] Figures 1 and 2 show a further exemplary use of the device according to the present invention in association with a safety helmet, which application is particularly useful for talking or listening music during a use of a motorcycle or other vehicles.

[0027] The device can also be used in practicing sports, and is not limited to a use with a helmet, since the earphone support can be associated, as stated, with any desired head covering device or can also be applied to a user head by a conventional resilient loop or the like.

[0028] Moreover, the inventive helmet is **characterized in that** the Bluetooth device comprises a magnetic detecting element, designed for switching on the device as the latter is engaged in its housing recess formed in the helmet.

[0029] Said helmet is furthermore provided with a Bluetooth device including an electronic coupling circuit for identifying, by radiofrequency waves, a correspondence between the Bluetooth device and related helmet, so that the communication device can not be used in different helmets of third parties.

[0030] It has been found that the invention fully achieves the intended aim and objects.

[0031] In fact, the invention provides a Bluetooth technology communication device which can be snap removably engaged in a housing recess formed in a helmet and which has moreover high functional and aesthetic characteristics, allowing to use a cellular phone in a full safe manner, while allowing a user to either talk or listen music, even if the user has his/her hands engaged in performing other activities.

[0032] In fact, the provision of a simple earphone support, including a snap engagement recess, allows the same communication device to be used in different operation modes and situations.

[0033] In practicing the invention, the used materials, as well as the contingent size and shapes, can be any, depending on requirements.

Claims

1. A sports helmet for motorcyclists and other sports, **characterized in that** said sports helmet comprises a wireless communication device, particularly for a use in a Bluetooth technology or the like, comprising an elongated body including a Bluetooth or the like apparatus, a sound diffuser and microphone; said elongated body having a base portion which can be removably snap engaged in a helmet recess formed at an ear portion of a user.
2. A helmet, according to claim 1, **characterized in that** said helmet comprises a communication device including an elongated body, which is constituted by a base portion meeting with an end portion arranged at an angle with respect to the base portion.
3. A helmet, according to claim 1, **characterized in that** in said base portion of said communicating device is arranged a sound diffuser at which are provided a plurality of slots or openings to allow sound generated by said diffuser to be diffused.
4. A helmet, according to claim 1, **characterized in that** at said end portion of said communicating device are provided a plurality of openings or slots for the microphone held inside the body of said device.
5. A helmet, according to claim 1, **characterized in that** on said elongated body of said communication device to be applied thereto, at said end portion or near said end portion, are provided control pushbuttons for controlling said communicating device.
6. A helmet, according to claim 1, **characterized in that** said helmet comprises a communication device including a recess into which is snap engaged, at least partially, the base portion of said device, thereby, in an engagement condition in a helmet, said diffuser slots are arranged near the ear pavilion of the user.

7. A helmet including a communicating device, according to claim 1, **characterized in that** the earphone supporting recess formed in said helmet comprises a box-like body, made of a thermoplastics rubber material, to which is pivoted a swinging element having the snap in recess or seat for said device, said box-like body being closed by a base and having, on an opposite side thereof, a bearing element for allowing the user pavilion to comfortably bear thereon. 5
8. A helmet including a communication device, according to claim 1, **characterized in that** said swinging element housed in said helmet is adapted to rotate with respect to said box-like body, so as to adjust the inclination of said device in a use period thereof. 10 15
9. A helmet including a communication device, according to claim 1, **characterized in that** said communication device can be removed from said helmet and coupled to a computer or to any other device adapted to playback sound or store said sound in said device or to transmit it to a headphone. 20
10. A helmet, according to claim 1, **characterized in that** said Bluetooth device comprises a magnetic detecting device actuating said device to a switched on condition, as said device is engaged in said housing seat or recess formed in said helmet. 25
11. A helmet, according to claim 1, **characterized in that** said helmet comprises a Bluetooth device including an electronic coupling circuit adapted to identify, through radiofrequency waves, a correspondence between said Bluetooth device and helmet, thereby preventing said device from being used in a helmet different from the helmet thereto said device is adapted to be fitted. 30 35

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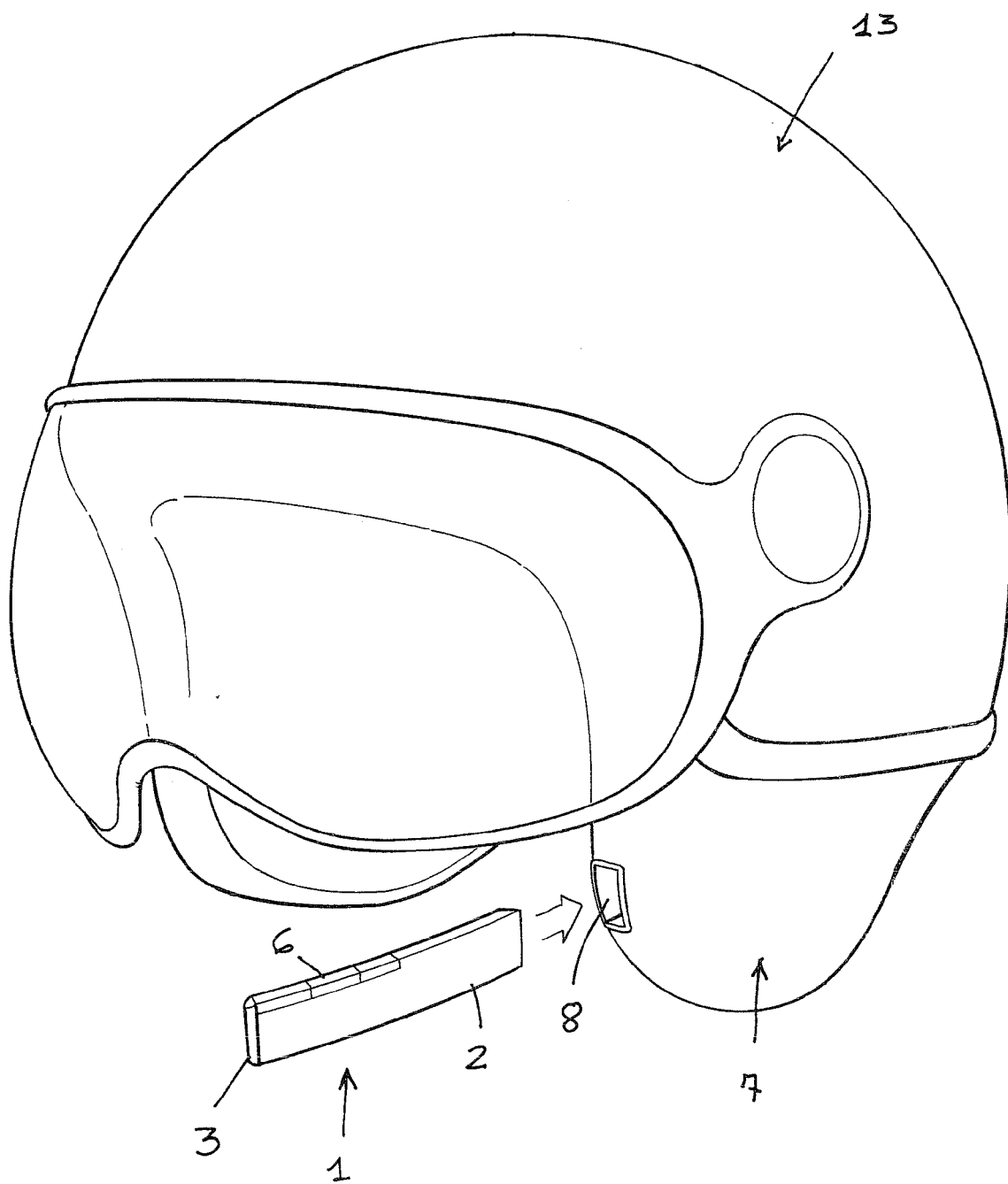


FIG. 1

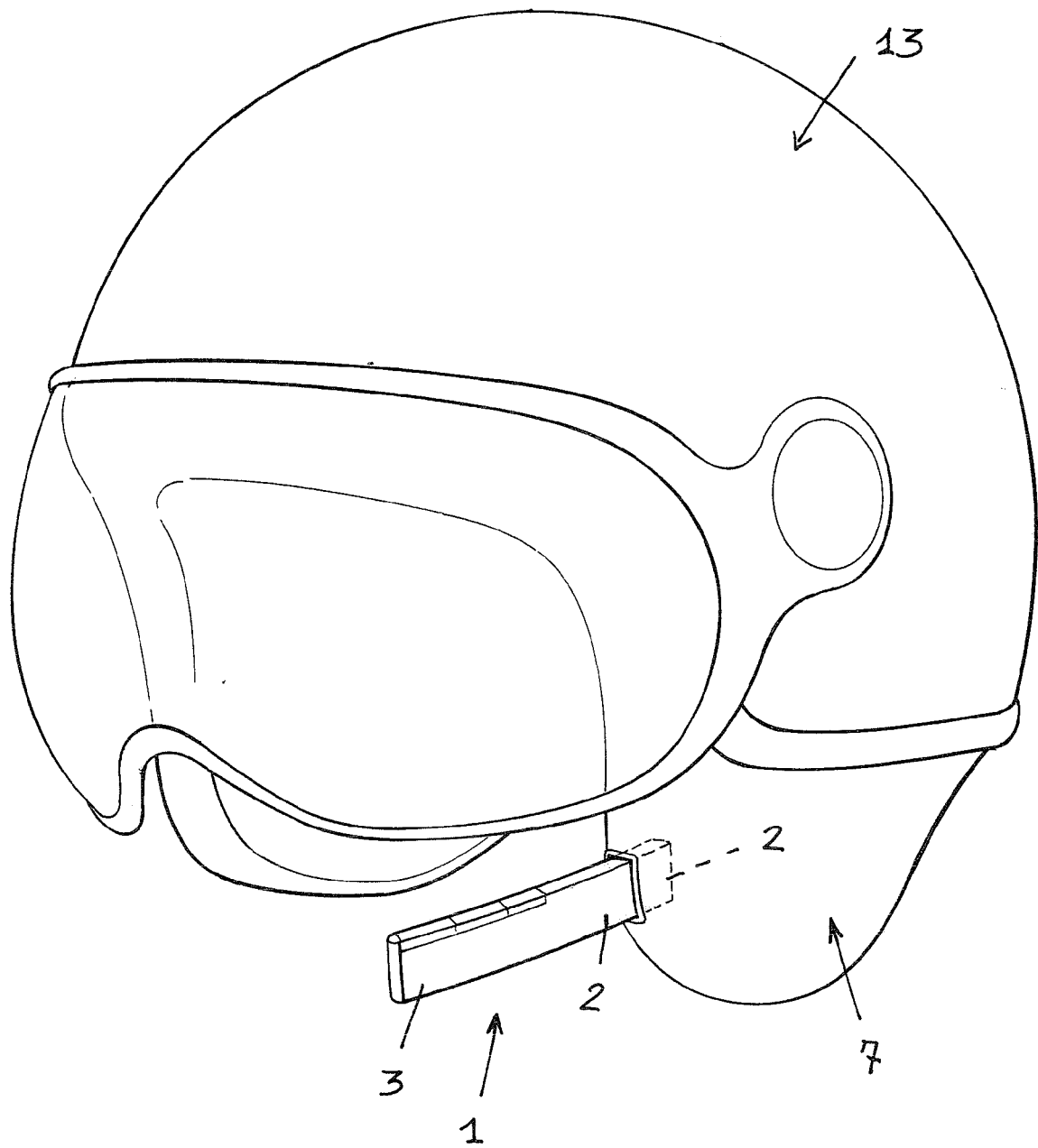
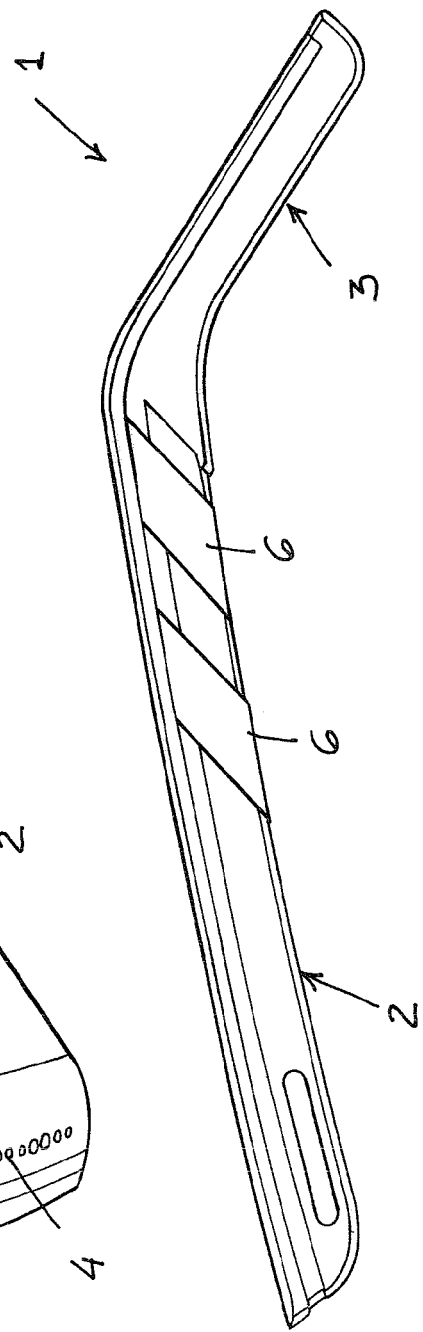
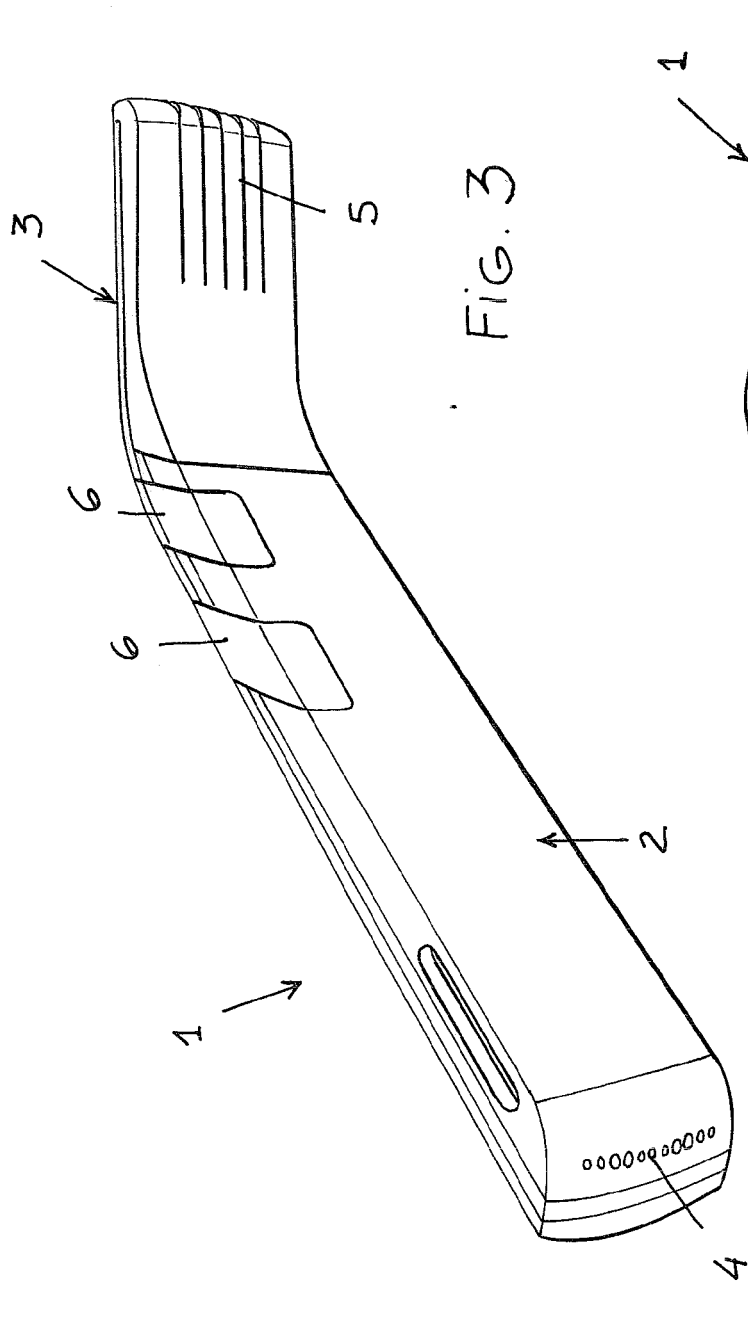


FIG. 2



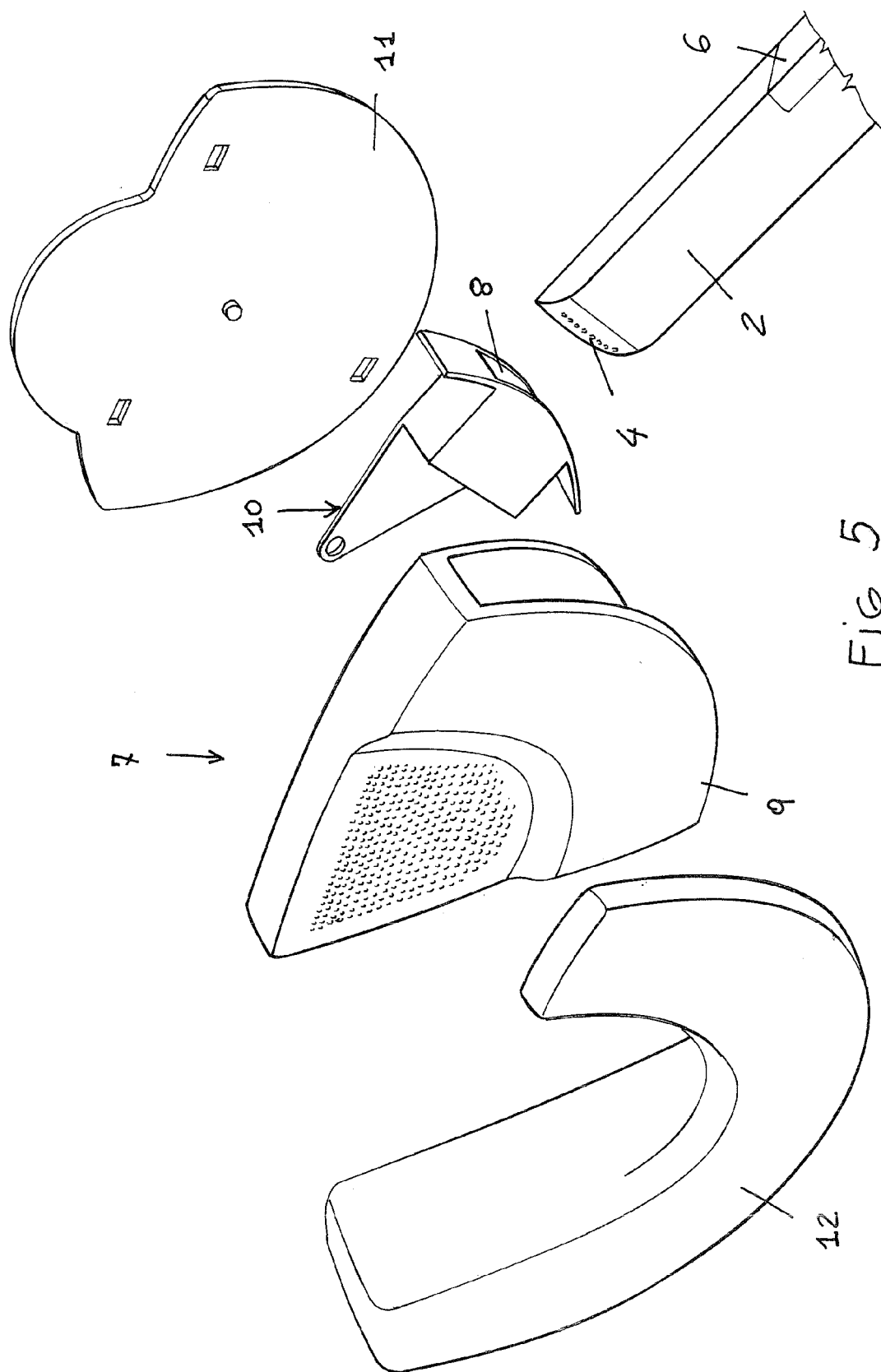


FIG. 5

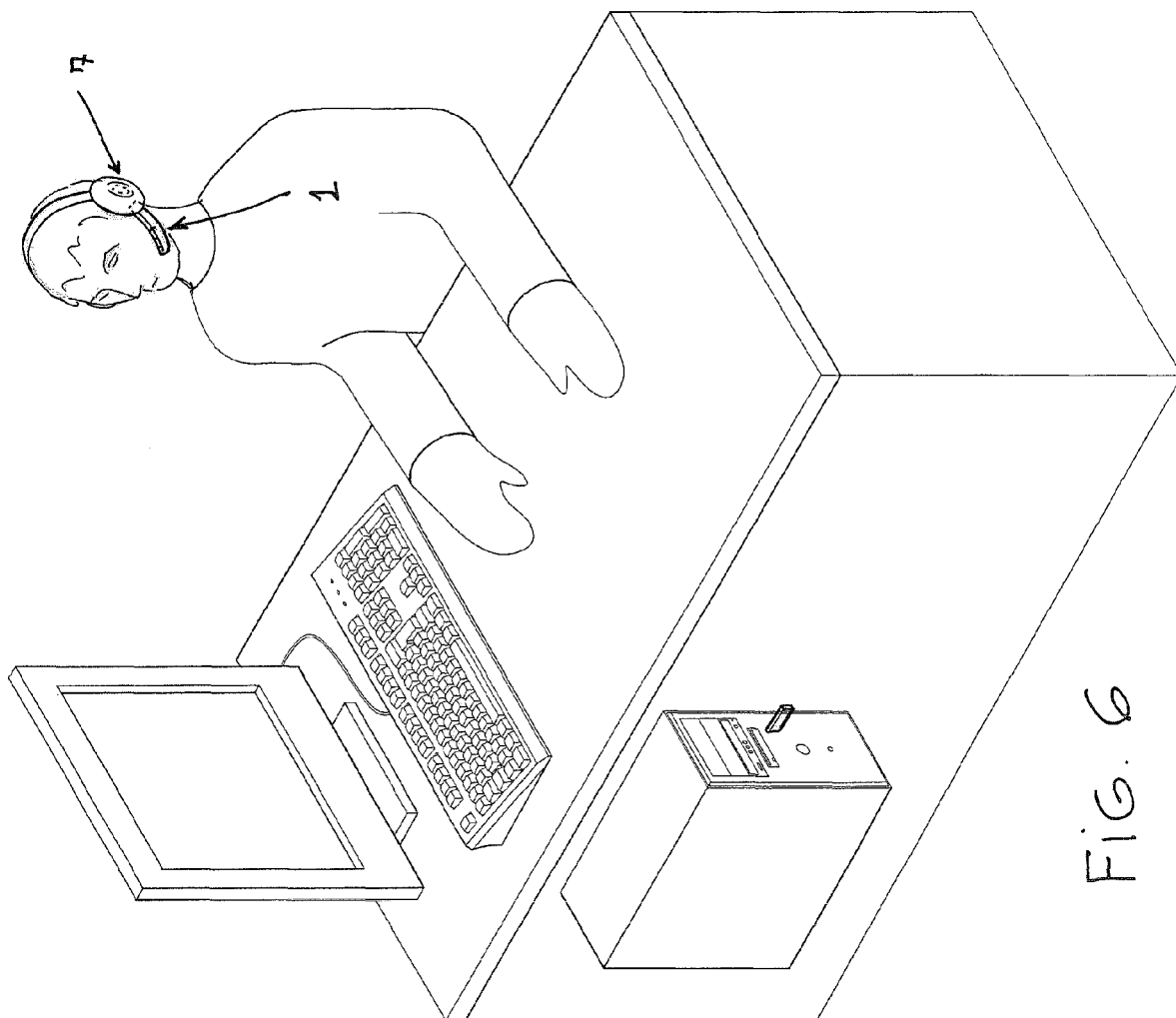


FIG. 6



EUROPEAN SEARCH REPORT

Application Number
EP 09 17 4927

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	WO 2008/053502 A (COBRA AUTOMOTIVE TECHNOLOGIES [IT]; MEMMOLA SERAFINO [IT]) 8 May 2008 (2008-05-08) * claim 1; figures 1,2 *	1	INV. A42B3/30
A	WO 2006/004796 A (CARDIO SYSTEMS INC [US]; GLEZERMAN ABRAHAM [IL]) 12 January 2006 (2006-01-12) * page 4, line 10 - page 5, line 11; figures 1,4 *	1	
A	EP 0 062 163 A (PEIKER HEINRICH) 13 October 1982 (1982-10-13) * claim 1; figure 1 *	1-2	
A	WO 01/76404 A (CREATIVE POOL TRENDSCOUTING GM [DE]; GOTTMEIER MARIO [DE]) 18 October 2001 (2001-10-18) * page 5 - page 6; figure 2 *	1	
A	US 5 142 700 A (REED JOHN W [US]) 25 August 1992 (1992-08-25) * claim 1; figure 1 *	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			A42B
Place of search		Date of completion of the search	Examiner
The Hague		9 February 2010	D'Souza, Jennifer
CATEGORY OF CITED DOCUMENTS 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 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 L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 17 4927

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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09-02-2010

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