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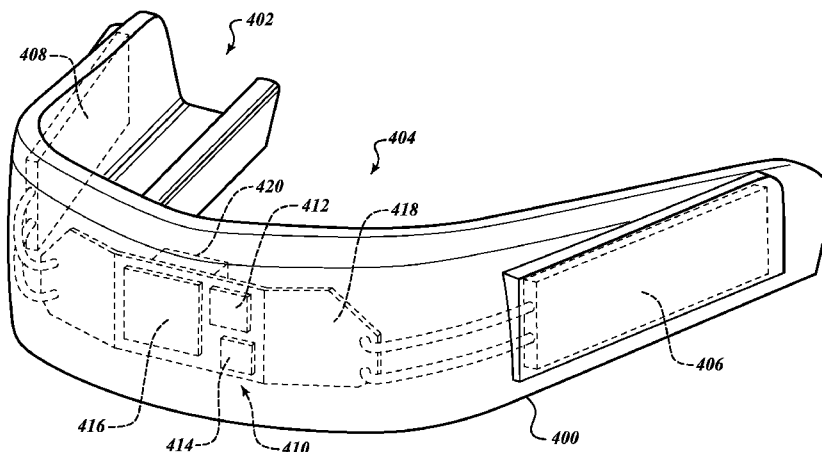
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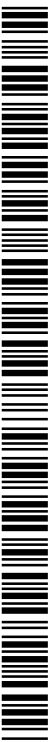
[Continued on next page]

(54) Title: MOUTH GUARD WITH SENSOR



**FIG. 9**

(57) Abstract: A mouth guard having a proximity sensor, an impact sensor, a processor in signal communication with the sensor, a memory in data communication with the processor, a transmitter in signal communication with the processor, and a battery. The processor is configured to allow data transmission the mouth guard has been inserted into a mouth. The processor is also configured to instruct the transmitter to transmit a signal if an impact above a predefined first threshold is sensed.





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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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**INTERNATIONAL SEARCH REPORT**

International application No.  
PCT/US 11/22220

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC(8) - A61B 5/103 (2012.01)  
USPC - 600/595  
According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC(8): A61B 5/103 (2012.01)  
USPC: 600/595

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
USPC: 600/300, 595, 587, 590, 595, 553; 433/6; 128/861, 859, 857, 903 .  
2/410, 411, 425

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
PatBase; Google Scholar; Free Patents Online  
Search Terms: mouthguard OR mouth guard, sensor, ethyl, processor, synchronization, time, clear, transmission

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2006/0166157 A1 (Rahman et al.) 27 July 2006 (27.07.2006), Figs. 1, 2, 8, 10; para [0013], [0015], [0029], [0036], [0038], [0047], [0054], [0055], [0057] & [0063]	1, 2, 8, 9 ----- 3-7, 10, 11, 15
X --- Y	US 2008/0269579 A1 (Schiebler) 30 October 2008 (30.10.2008), Figs. 1 & 5; para [0019], [0023], [0027], [0029], [0035] & [0036]	12, 16 ----- 13-15, 17, 18
Y	US 6,941,952 B1 (Rush, III) 13 September 2005 (13.09.2005), Figs. 7, 8; col 1, ln 18-40, col 5, ln 53-55, col 7, ln 35-36	3-5, 10, 11
Y	US 5,621,922 A (Rush, III) 22 April 1997 (22.04.1997), Figs. 1, 2; col 3, ln 64 - col 4, ln 2	6
Y	US 4,763,284 A (Carlin) 09 August 1998 (09.08.1998), Fig. 7; col 8, ln 19-26	13, 14
Y	US 2002/0109621 A1 (Khair et al.) 15 August 2002 (15.08.2002), Figs. 6 & 7; para [0082], [0084]	17, 18
Y	US 2005/0177929 A1 (Greenwald et al.) 18 August 2005 (18.08.2005), para [0121], [0122]	7

Further documents are listed in the continuation of Box C.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 22 October 2012 (22.10.2012)	Date of mailing of the international search report <b>05 NOV 2012</b>
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