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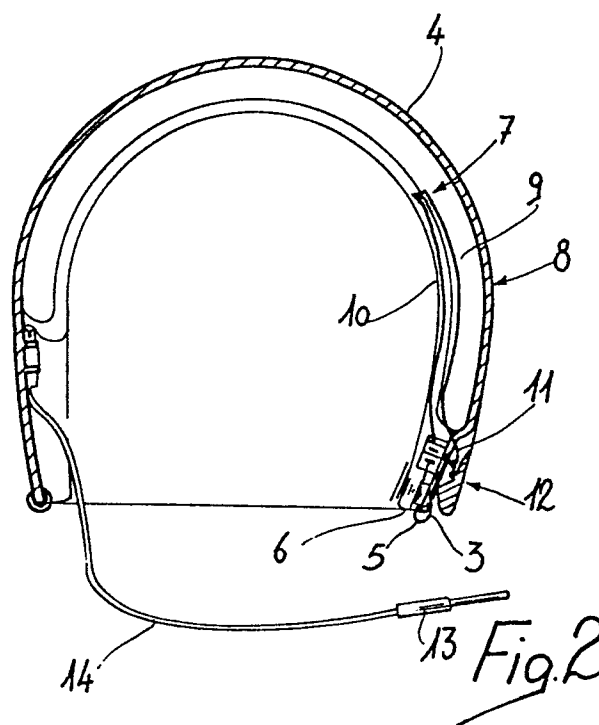
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(54) **Warning device for helmets.**

(57) Warning device for crash-helmets comprising an electric circuit entirely accommodated in any known crash-helmet. The circuit is constituted by power supply means (2) connected to acoustic and/or luminous warning devices (6) and to two switches (7,11). One (7) of said switches is normally open and accommodated within the helmet shell and one (11) is normally closed and is located within a fastening (12,13) for the chin strap (14).



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WARNING DEVICE FOR HELMETS

The present invention relates to a warning device for helmets.

The use of crash-helmets for motorcyclists has produced a considerable decrease in injuries and deaths in case of road accidents.

Nonetheless, it has been observed that, in many accidents, at the moment of the impact the crash-helmet has slipped off the head with imaginable tragic consequences because the user was not wearing the helmet properly, namely failed to fasten the chin strap.

The omitted fastening of the chin strap is generally due to forgetfulness of the part of the motorcyclist or to carelessness.

Naturally the abovementioned forgetfulnesses may also exist for people who wear a helmet not only for motorcycling use but also, for example, for all who use it for work or in sports.

From the above, the aim of the present invention is to solve the above described problems, in particular to provide a device to be applied to helmets of any kind which warns of the omitted fastening of the chin strap.

Within the proposed aim, an important object is to provide a device which operates only from the moment in which the crash-helmet is put on until that of fastening of the chin strap.

Another object is to provide a device which is easily applicable both to future production and to the crash-helmets already present on the market with small and simple modifications.

Not least object is to provide a device which is easily executable and characterized by low costs.

A further object is to provide a helmet, in particular crash-helmet incorporating the warning device of this invention.

This aim, as well as these and other objects which will become apparent hereinafter, are achieved by a warning device for helmets, characterized in that it comprises an electric circuit entirely accommodated in a helmet, said circuit comprising power supply means connected to warning means and to two switches, a first one of said switches being normally open and accommodated within the helmet shell and a second one being normally closed and interacting with the fastening means of the chin strap.

Further characteristics and advantages of the invention will become apparent from the detailed description of an embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

figure 1 shows an electric circuit of the warning device;

figure 2 is a cross sectional view of a crash-

helmet on which the warning device according to the invention is applied.

With reference to the above described figures, the acoustic and/or luminous warning device is generally indicated by the reference numeral 1, and comprises a battery power supply 2 which is conveniently accommodated on the chin-rest 3 of a full-face crash-helmet 4, but which can naturally be accommodated in any position within said crash-helmet.

Said power supply 2 is connected by means of electric wires 5 to an electronic acoustic beeper 6 or to a warning buzzer accommodated within the crash-helmet, and/or to luminous indicators located in regions visible when the crash-helmet is worn.

The electric circuit is therefore closed by two switches, a first one whereof, indicated at 7, is of the normally open type and is accommodated within a lateral portion 8 of said crash-helmet between the polystyrene covering 9 and the padding 10, while a second, indicated at 11, of the normally closed type, is accommodated within one of the fastening elements 12 and 13 of the strap 14.

Naturally the previously described switches may have any shape and be of any constructive type, in particular magnetic, mechanical, capacitive, etc., and the fastenings of the strap may also be of any type.

The operation of the acoustic and/or luminous warning device is the following: when the crash-helmet is not worn the switch 7, being normally open, does not allow the flow of electric current in the circuit and said warning device is off.

At the moment of wearing, the head of the user, pressing on the padding 10, closes the switch 7 and therefore the circuit activates the beeper 6 and/or the luminous indicator which emits in addition to the luminous warning signal also an acoustic warning signal.

This warning ceases only at the moment in which, by fastening the strap, the opening of the switch 11 is obtained.

From what has been previously described it is apparent that the invention achieves the intended aim and objects since a device has been provided which warns of the omitted fastening of the chin strap and which is operated only from the moment of the wearing of the crash-helmet to that of the fastening of the chin strap.

Furthermore, since the system is constituted by simple elements easily assembleable to one another, it is applicable without problems both to future production and to all the crash-helmets already present on the market.

Naturally said device can be applied to any

type of crash-helmet (full-face, open face) to whatever kind of use it may be assigned and whatever type of material it may be made of.

The invention thus conceived is susceptible to numerous modifications and variations, all of which are within the scope of the inventive concept.

Furthermore, all the details may be replaced with other technically equivalent elements.

In practice, the materials employed, as well as the dimensions, may be any according to the requirements.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the scope of each element identified by way of example by such reference signs.

8. A helmet provided with the warning device of claim 1-7.

Claims

1. Warning device for helmets, characterized in that it comprises an electric circuit entirely accommodated in a helmet, said circuit comprising power supply means (2) connected to warning means (6) and to two switches, a first one (7) of said switches being normally open and accommodated within the helmet shell and a second one (11) of said switches being normally closed and interacting with the fastening means (12,13) of the chin strap (14).

2. Warning device according to claim 1, characterized in that said power supply means is constituted by a battery (2) accommodated in the chin-rest of a full face crash-helmet (4).

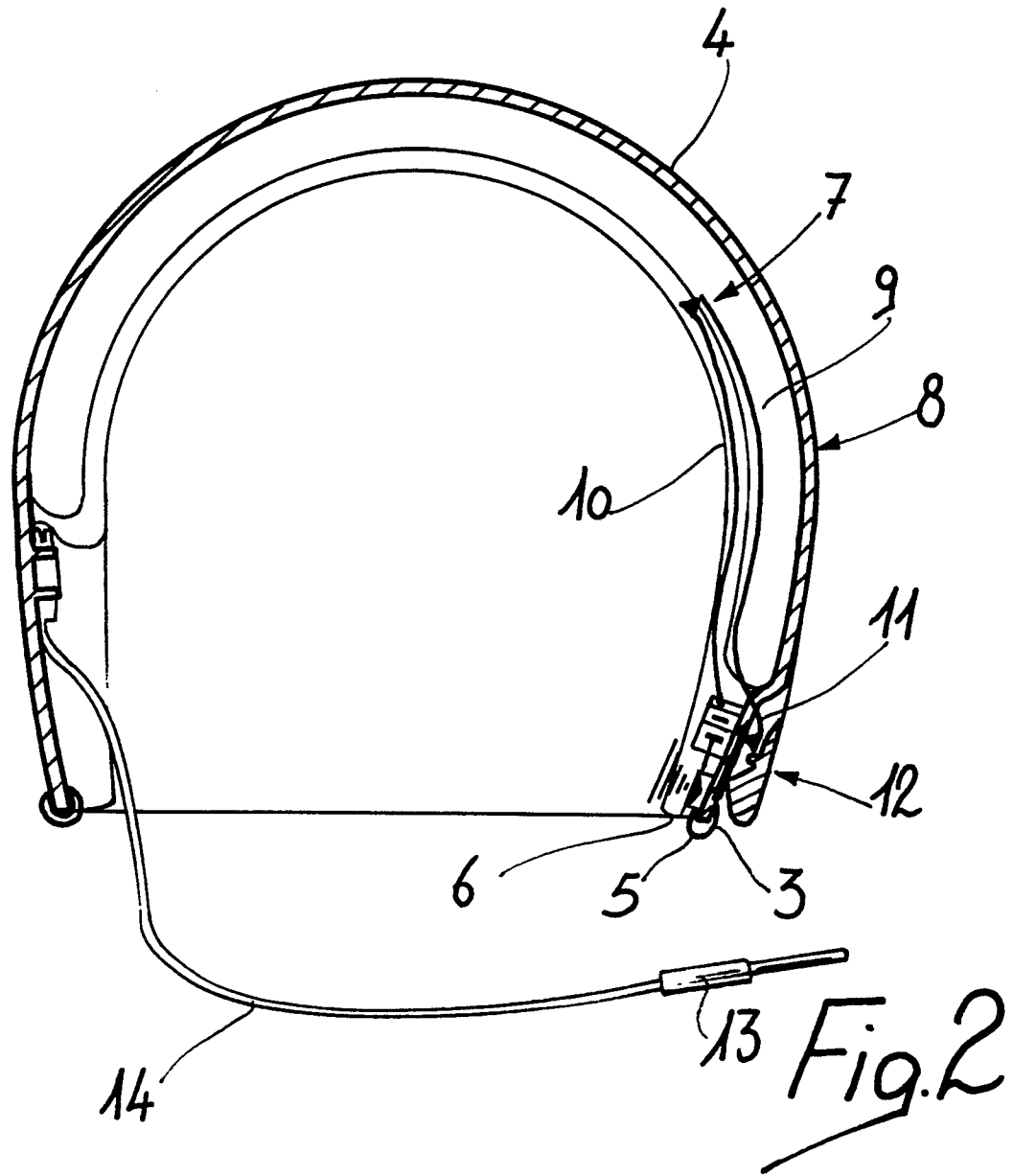
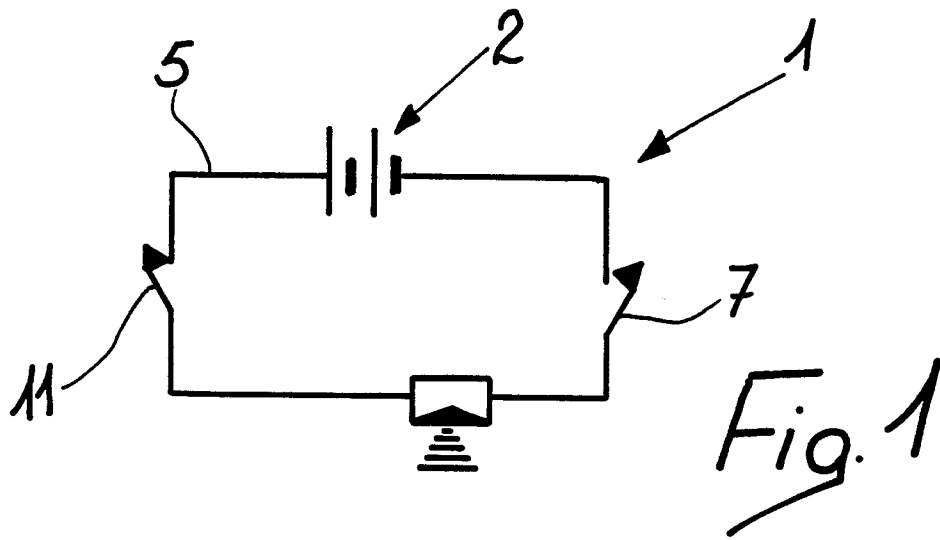
3. Warning device according to one or more of the preceding claims, characterized in that said warning means is constituted by an electronic beeper (6) accommodated inside said crash-helmet.

4. Warning device according to one or more of the preceding claims, characterized in that said normally open switch (7) is accommodated within a lateral portion (8) of said crash-helmet (4) between the polystyrene covering (9) and the padding (10), said normally closed switch (11) being accommodated inside one of the fastening elements (12) of the strap (14).

5. Warning device, according to one or more of the preceding claims, characterized in that said warning means comprises a light bulb.

6. Warning device, according to one or more of the preceding claims, characterized in that said warning means comprises a LED.

7. Warning device, according to one or more of the preceding claims, characterized in that said warning means comprises a buzzer.





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. 4)
A	DE-A-3 032 371 (KRÜGER) ---		A 42 B 3/00
A	DE-U-8 619 141 (UVEX WINTER OPTIK) ---		
A	DE-A-2 619 947 (OPTAC WILFRID WELTIN) ---		
A	WO-A-8 601 379 (EBERT) ---		
A	DE-U-8 511 154 (PEIKER) ---		
A	FR-A-2 212 756 (RAYMOND) ---		
A	DE-A-2 603 435 (SZPERKOWSKI) -----		
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			A 42 B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 28-06-1988	Examiner BOURSEAU A.M.
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			