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(72) Inventor: **Caravita, Antonello**
6900 Lugano (CH)

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

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(71) Applicant: **CARFED S.A.**
6900 Lugano (CH)

(54) **Luminescent element for identifying persons, articles and domestic animals in poor illumination conditions**

(57) An identifier element construction for identifying persons, articles and domestic animals in poor illumination conditions comprises a phosphorescent or luminescent material body coupled to a plate-like element, for example for a domestic animal or a supporting element to be applied to an underwater equipment.

The construction can be provided with a "negative" wording, adapted to be read on the luminescent surface even in a full darkness condition.

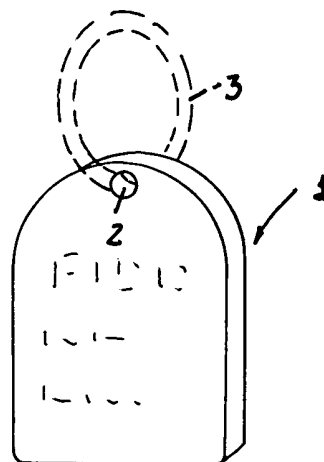


FIG. 1

Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to an identifier element construction, for identifying, in poor illumination conditions, persons, articles and domestic animals.

[0002] There are a lot of situations in which it would be necessary or very important to properly identify a person, an article or an animal in poor illumination conditions.

[0003] For example, diving activities with breathing apparatus are frequently made under insufficient illumination conditions, even if they are performed in a day period, because of the illumination loss due to the refraction of solar light by water.

[0004] Both in sports diving, and in professional diving activities, it would be very important to hold a visual compact between the divers, and this for self-evident safety reasons.

[0005] In this connection it should be pointed out that also the diving instruments and apparatus can be difficult to be properly identified, in particular if they are arranged on the sea bottom or if they accidentally fall.

[0006] Since that rarely underwater illumination conditions would be satisfactorily good, it would be very important to have means for easily identifying persons and equipment, which could be of vital importance.

SUMMARY OF THE INVENTION

[0007] Accordingly, the aim of the present invention is to provide an identifier element construction, specifically designed for quickly and easily identifying persons, articles or animals, in poor illumination conditions.

[0008] Within the scope of the above mentioned aim, a main object of the invention is to provide such a luminescent construction adapted to easily identify underwater articles and persons, in poor illumination conditions.

[0009] Another object of the present invention is to provide such an identifier plate of small size, which, however, can be immediately detected even at a comparatively great distance.

[0010] Another object is to provide such a plate which does not hinder the animal activities.

[0011] Yet another object of the present invention is to provide such an identifier plate which can be easily and economically made by existing methods and systems.

[0012] Yet another object of the present invention is to provide such an identifier element construction which can be easily applied to apparatus as conventionally used in diving activities, as assisted by breathing apparatus.

[0013] Yet another object is to provide such an identifier element construction which is very simple construction wise and unexpensive, and which can be eas-

ily constructed on a large scale.

[0014] Yet another object of the present invention is to provide such an identifier element construction which has a very reduced size and does not hinder normal diving activities.

[0015] According to one aspect of the present invention, the above mentioned aim and objects, as well as other objects, which will become more apparent hereinafter, are achieved by an identifier element construction for identifying, in poor illumination conditions, persons, articles and domestic animals, characterized in that said identifier element construction comprises a body made of a phosphorescent or luminescent material which can be coupled to a plate element, for example for a domestic animal or to a supporting means to be applied to an underwater apparatus.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] 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 invention, which is illustrated, by way of an indicative, but not limitative example, in the accompanying drawings, where:

Figure 1 is a perspective view of an identifier plate according to the invention, having a substantially rectangular configuration;

Figure 2 is a further perspective view of an identifier plate according to the invention, having a substantially circular configuration;

Figure 3 shows a possible application of the plate shown in figure 1 to a dog;

Figure 4 illustrates a possible application of the identifier plate of figure 2 to a cat;

Figure 5 schematically illustrates the use of the identifier plate according to the present invention; said identifier plate being visible even in a full darkness condition;

Figure 6 illustrates a luminescent identifier element construction, having an elastic band configuration to be applied to a bottle;

Figure 7 illustrates a luminescent identifier element construction made as a mask strip or belt element; Figure 8 illustrates a luminescent identifier element construction in the shape of a plate seamed to the diving wetsuit;

Figure 9 illustrates a luminescent identifier element construction in the form of a resilient or elastic band applied to the flippers;

Figure 10 illustrates a luminescent identifier element construction in the form of an elastic or resilient band applied to the faucet assembly;

Figure 11 illustrates a luminescent identifier element construction, in the form an elastic band applied to the ankles of the diver;

Figure 12 illustrates a luminescent identifier ele-

ment construction, in the form of a resilient band applied to a torch or flashlight; and
Figure 13 illustrates a luminescent identifier element construction, in the form of a resilient or elastic band applied to a float for a fishing line.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0017] With reference to the number references of the above mentioned figures, the identifier plate construction, according to the present invention, which has been generally indicated by the reference number 1, comprises a plate element, made of a special phosphorescent or luminescent plastics material.

[0018] The identifier element comprises a hole 2 for applying a ring element 3 or other attachment element to a conventional collar 4 of an animal.

[0019] In particular, the mentioned plate element can have different size and shapes depending on the provided use, or on the animal to which the plate must be applied.

[0020] For example, in figure 1 is shown a substantially rectangular plate to be applied to a dog or other domestic animal of a comparatively large size, as is shown in figure 3.

[0021] Figure 2 illustrates a circular identifier platen and, as shown in figure 4, its size can be reduced to fit it to a smaller size animal such as a cat.

[0022] In this connection it should be apparent that the contingent configurations and shapes can be different from the illustrated configurations and size, and can be differently combined, depending on requirements.

[0023] On the identifier plate element it would be also possible to engrave or reproduce in other suitable manner data for identifying the animal, if proprietor or any other useful information.

[0024] The phosphorescent or luminescent property of the plate element allows to easily identify the plate, and accordingly the animal bearing it, even under poor or insufficient illumination conditions.

[0025] With reference to the number references of figures 6 to 13, the luminescent identifier construction according to the invention comprises a body made of a luminescent material, coupled to a supporting means 701, which can be applied to an underwater equipment 702.

[0026] The figures show several application examples of the luminescent identifier construction according to the present invention.

[0027] More specifically, figure 6 illustrates a luminescent identifier construction in the form of an elastic or resilient band 701, which can be applied to a bottle 702.

[0028] Figure 7 illustrates a luminescent identifying or identifier construction in the form of a strip 101 or belt 703 of an underwater mask 704.

[0029] This luminescent identifier construction can also be made in the form of a resilient or elastic band

adapted to form the supporting band of the mask.

[0030] Figure 8 illustrates a plate-like luminescent identifier construction 201 seamed to the diving wetsuit 705.

[0031] The luminescent identifier plate 201 can also be seamed, or attached in any other suitable manner, to other equipment elements, such as, for example, the so called hydrostatic "jacket".

[0032] Figure 9 illustrates a luminescent identifier construction in the form of an elastic or resilient band 701, applied to the diver flippers 706.

[0033] Figure 10 illustrates a luminescent identifier construction, in the form a resilient or elastic band 301, applied to the faucet assembly 707 of the diver bottle 702.

[0034] Advantageously, the suitably sized resilient band 301 can also be applied, for example, to the air delivery control knob of the diver bottle.

[0035] Figure 11 shows a luminescent identifier construction in the form of an elastic band 401, applied to the ankles of the diver.

[0036] The resilient band 401, in particular, can also be applied in any other suitable manners, for example to the diver arms.

[0037] Figure 12 illustrates a luminescent identifier construction in the form of an elastic band 501, applied to a torch or flashlight 708.

[0038] Figure 13 illustrates a luminescent identifier construction in the form of a resilient band 601 applied to a float 709 for a fishing line.

[0039] The luminescent identifier construction, in the form of an elastic, resilient band, plate, and so on, can also be applied in several other manners to the underwater equipment, in addition to those which have been hereinabove illustrated by way of an example.

[0040] The application of the luminescent identifier construction to instruments such as torches, underwater guns, photographic cameras and videocameras, knives and so on, allows to easily identify the article, for example in a case in which it is accidentally loosen or left on the sea bottom.

[0041] The example shown in figure 13 shows an application of the luminescent identifier construction according to the present invention in a nautical field, to make immediately visible articles used for water application, or which can accidentally fall into water and which, accordingly, must be easily identified for recovery.

[0042] The advantageous application of the luminescent identifier construction according to the present invention are, as it would be easily apparent, innumerable, and are not limited to those which has been hereinabove illustrated and shown by example.

[0043] A very important aspect of the present invention relates to the possibility of printing, in an indelible manner, on the luminescent resilient identifier construction, "negative" wordings, i.e. black wordings on the luminescent surface of the identifier articles.

[0044] Since the support is luminescent, said wordings could be easily read out even in a full darkness condition.

[0045] It has been found that the invention fully achieves the intended aim and objects.

[0046] In fact, the invention provides a luminescent identifier construction which allows to easily identify articles and persons in an underwater environment, even in poor illumination conditions.

[0047] The identifier construction made as a small plate, can be used in home or in outside environments, to easily identify animals, either domestic or not, to prevent any danger situations from occurring, or merely for locating the animal.

[0048] The plate identifier construction according to the invention can also be advantageously used on different articles, for locating them under poor illumination conditions.

[0049] The identifier construction according to the present invention, moreover, can also be used for locating persons and animals, bearing an article, or the article itself.

[0050] The subject construction can be applied to resilient elements of any shape and size, and in particular to resilient filaments for eyeglass rods and frame, watch bracelets, a lot of domestic use articles, cosmetic and sport articles, such as ankle bands for jogging, bicycles and so on.

[0051] The elastic band identifier construction can also be used as a bracelet.

[0052] In practicing the invention, the used materials and the contingent size and shapes can be any, depending on requirements and the status of the art.

Claims

1. An identifier element construction for identifying, in poor illumination conditions, persons, articles and domestic animals, **characterized in that** said identifier element construction comprises a body made of a phosphorescent or luminescent material which can be coupled to a plate element, for example for a domestic animal or to a supporting means to be applied to an underwater apparatus.

2. An identifier element construction, according to claim 1, **characterized in that** said plate element comprises a hole for applying an attachment ring or other attachment element to an animal collar.

3. An identifier element construction, according to claim 1, **characterized in that** said plate element has a substantially rectangular configuration.

4. An identifier element construction, according to claim 1, **characterized in that** said plate identifier element has a substantially circular configuration.

5. An identifier element construction, according to claim 1, **characterized in that** said plate identifier element bears engraved thereon data provided for identifying said animals, its proprietor or any other desired information.

6. An identifier element construction, according to claim 1, **characterized in that** said identifier element construction comprises a body made of a luminescent material, coupled to a support means to be applied to a diving equipment.

7. An identifier element construction, according to claim 6, **characterized in that** said support means comprises a resilient element.

8. An identifier element construction, according to claim 6, **characterized in that** said supporting means comprises a supporting plate.

9. An identifier element construction, according to claim 6, **characterized in that** said construction is made in the form of an elastic band to be applied to a diving bottle.

10. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of a strip applied to a belt of an underwater mask.

11. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of an elastic band, adapted to provide a supporting band for a diving mask.

12. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of an identifier plate applied to a diving wetsuit.

13. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of an identifier plate seamed or attached in any other suitable manner to elements of a diving equipment, such as to a hydrostatic jacket.

14. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of a resilient or elastic band applied to diving flippers.

16. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of an elastic band applied to a diving bottle faucet assembly.

16. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of an elastic band, applied to an air delivery control knob.

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17. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of an elastic band applied to the ankles of a diver.

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18. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of an elastic band applied to an arm of a diver.

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19. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of an elastic band applied to an instrument or tool.

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20. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of an elastic band applied to a torch.

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21. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of an elastic band, applied to a diving gun.

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22. An identifier element construction, according to claim 6, **characterized in that** said identifier element construction is made in the form of an elastic band, applied to a float for a fishing line.

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23. An identifier element construction, according to one or more of the preceding claims, **characterized in that** said identifier element construction comprises one or more of the disclosed and/or illustrated characteristics.

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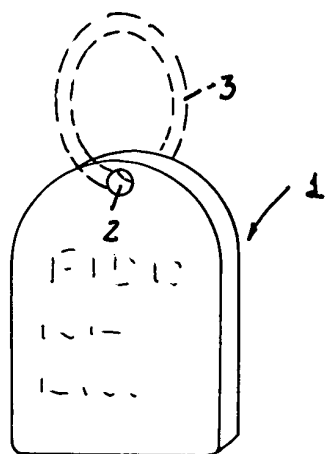


FIG. 1

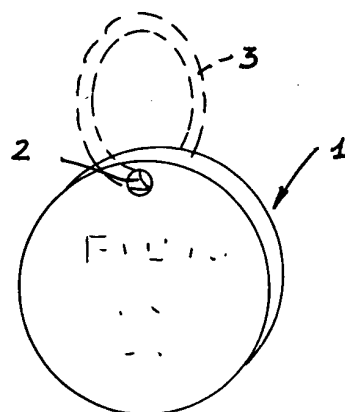


FIG. 2

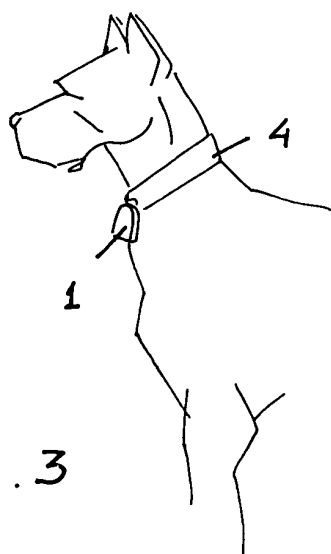


FIG. 3

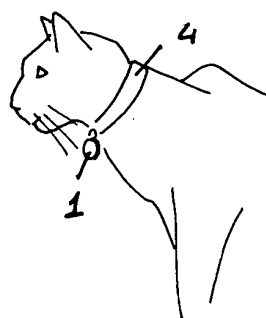


FIG. 4

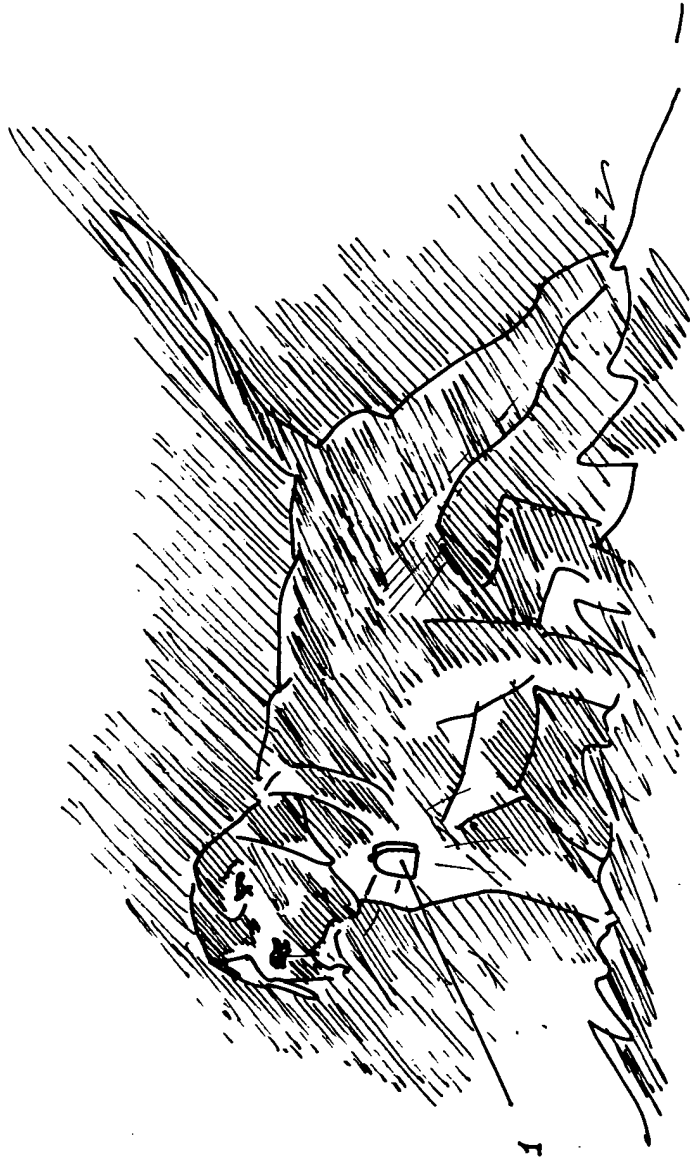


FIG. 5

FIG. 6

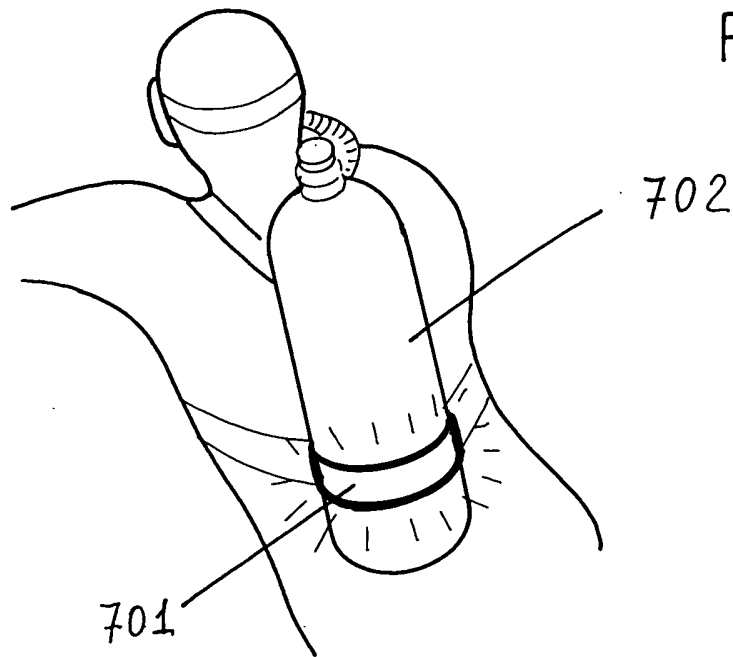


FIG. 7

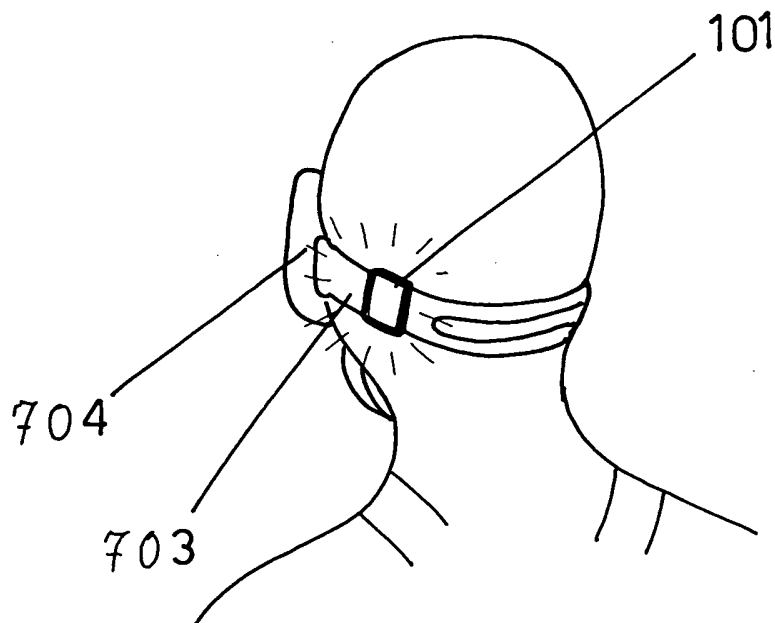


FIG. 8

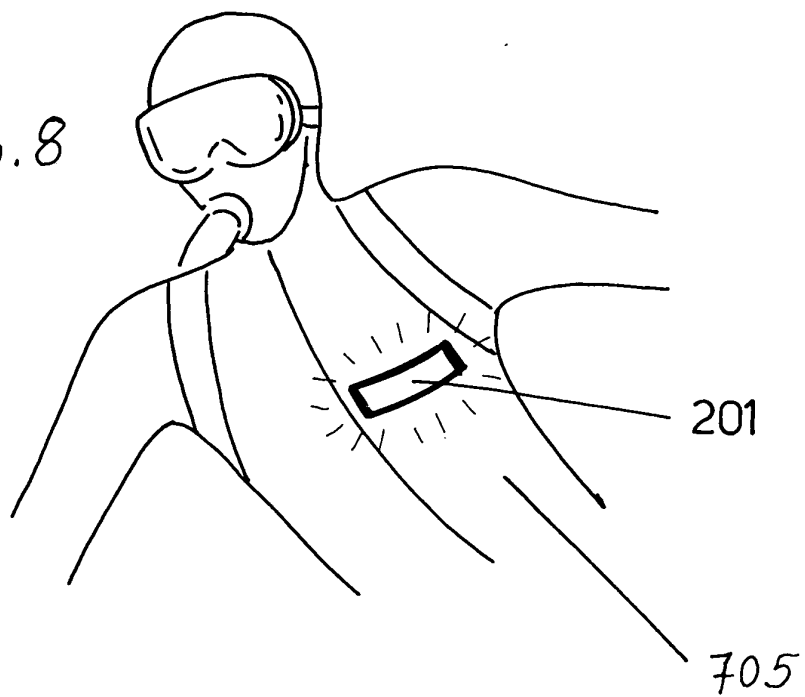
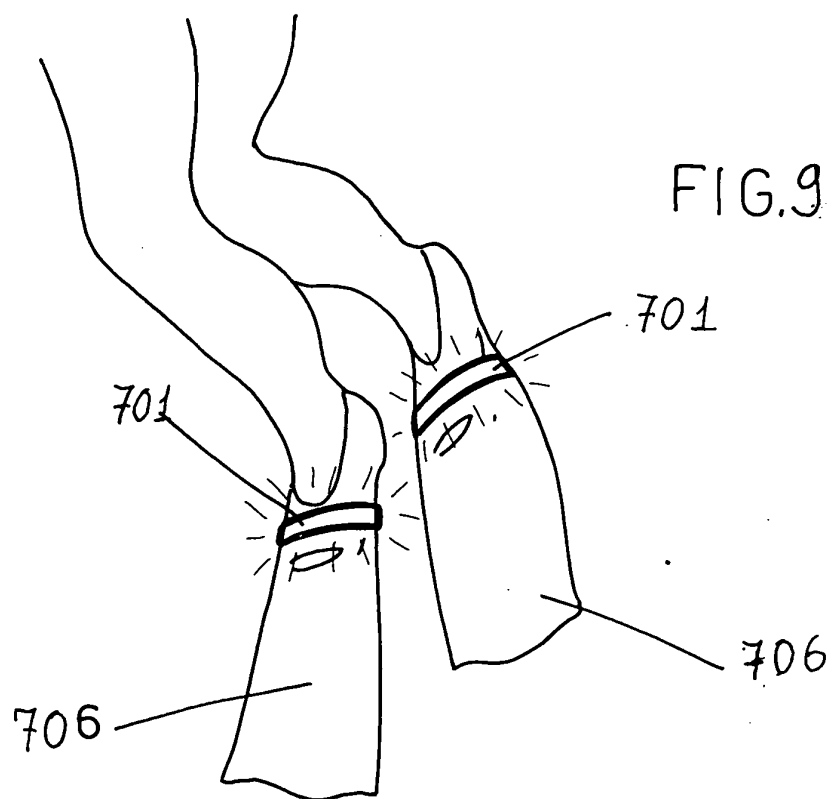


FIG. 9



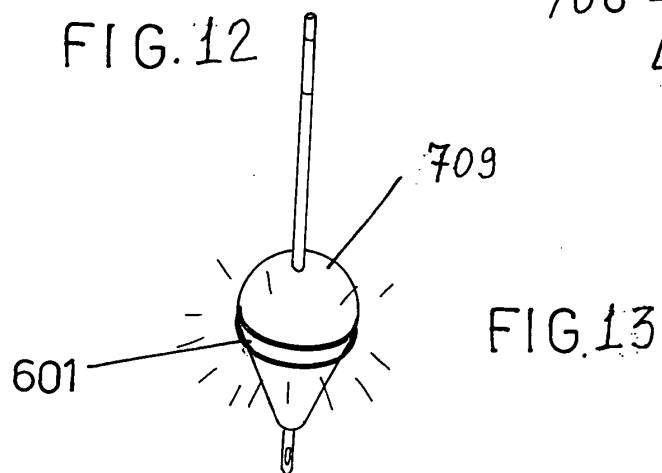
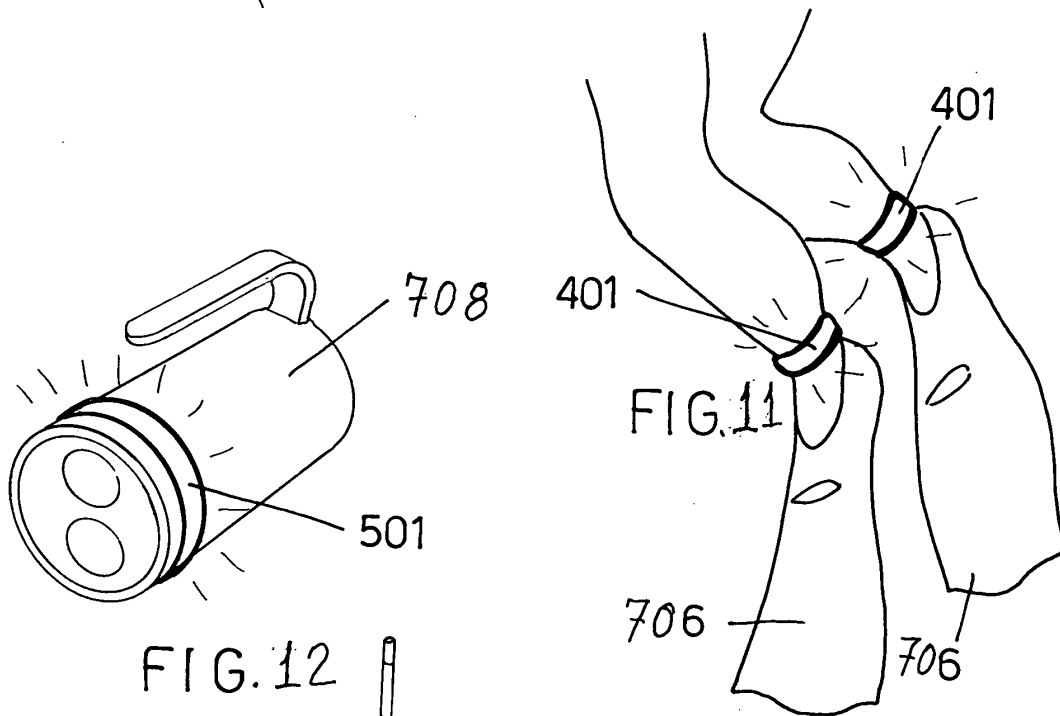
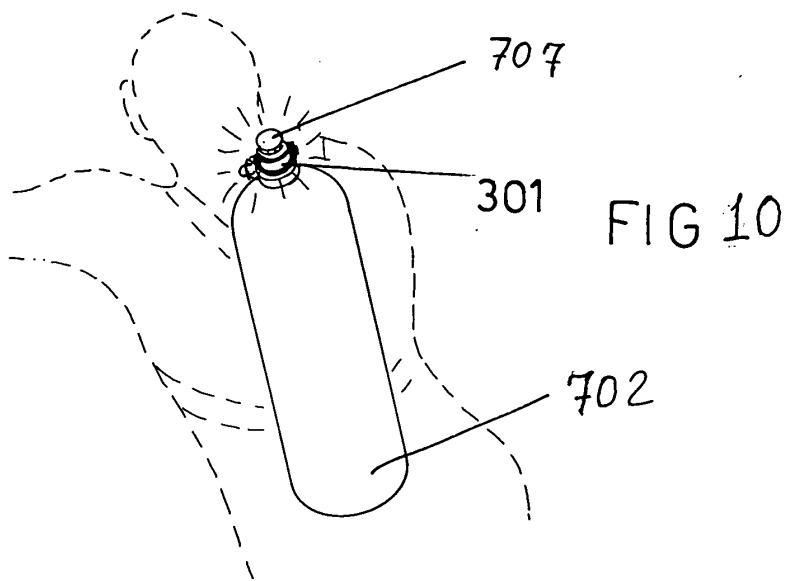


FIG. 13



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 04 02 2143

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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Place of search Munich		Date of completion of the search 23 March 2005	Examiner Hambach, D
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
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EP 04 02 2143

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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