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(71) Applicant: **TEKNOWARE OY**
15200 Lahti (FI)

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(72) Inventor: **Niemkinen Tapio**
15200, Lahti (FI)

(74) Representative: **Savolainen, Seppo Kalevi**
Oy Kolster Ab,
Iso Roobertinkatu 23,
P.O. Box 148
00121 Helsinki (FI)

(54) **Semaphore illuminator**

(57) The invention relates to a semaphore illuminator, which comprises at least two superimposed plates (1, 2), at least one of which contains information, and a light source (5) for illuminating the plate structure. The plates (1, 2) are spaced apart by seals (3) arranged between the plate edges to close, in a watertight manner, an intermediate space (4) formed between two adjacent plates.

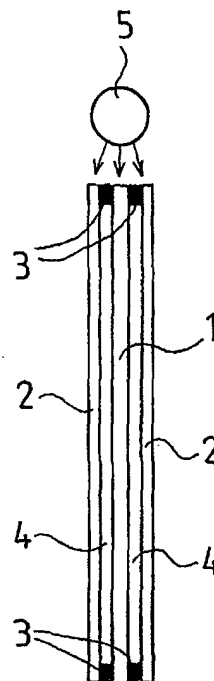


FIG. 1

Description

BACKGROUND OF THE INVENTION

[0001] The invention relates to a semaphore illuminator, which comprises at least two superimposed plates, at least one of which contains information, and a light source for illuminating the plate structure.

[0002] Semaphore illuminators according to the invention are used in outdoor conditions, for example on ship decks to indicate the location of a rescue station.

[0003] In a conventional semaphore illuminator arrangement, a backing plate and a front plate, or an intermediate plate and outer plates are either joined together or only a very narrow slot remains between them. Even though the aim is to make the illuminators watertight, some sea water or condensation water may be able to enter the space between the plates and thus spread onto the plate surfaces due to capillarity. The resulting film of moisture between the plates produces an optical illusion, wherefore the information becomes blurred due to distorted colours and outlines. Furthermore, in a salt water environment the drying of water produces a disturbing grey saline layer on the inner surfaces of the plates.

SUMMARY OF THE INVENTION

[0004] An objective of the invention is thus to provide a semaphore illuminator of the type described at the beginning in order to avoid the aforementioned problems. This is achieved by a semaphore illuminator according to the invention, which is characterized in that the plates are spaced apart by means of seals arranged between the plate edges to close, in a watertight manner, an intermediate space formed between two adjacent plates.

[0005] The invention is thus based on the idea of, on the one hand, spacing different plates of a semaphore illuminator sufficiently apart so as not to cause capillarity, and on the other hand, simultaneously preventing the entry of water and moisture, necessary for capillarity, to the spaces between the plates.

[0006] The reliability of operation and useful life of the semaphore illuminator according to the invention are thus far better than in the prior art arrangements, but the costs are hardly any greater.

LIST OF FIGURES

[0007] The invention will be described below by means of a few illustrative embodiments and with reference to the accompanying drawings, in which

Figure 1 shows a side view of a semaphore illuminator according to the invention,
Figure 2 shows a front view of the semaphore illuminator according to Figure 1,
Figure 3 shows a side view of another semaphore

illuminator according to the invention, and
Figure 4 shows a side view of yet another semaphore illuminator according to the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0008] The semaphore illuminator shown in Figures 1 and 2 comprises an intermediate plate 1 and outer plates 2 arranged on each side thereof. The guiding information, such as a text, an image, a combination thereof etc., can be located on the surfaces of the intermediate plate 1 and/or on the inner surfaces of the outer plates 2. The intermediate plate 1 and both outer plates 2 are spaced apart by means of seals 3 arranged between the plate edges to close intermediate spaces 4 formed between the plates 1 and 2 such that they become impervious to at least water. Therefore, the intermediate spaces 4 are protected at least from water and moisture, which cannot thus damage information surfaces.

[0009] The plate structure described above is illuminated by a light source 5, which is also a waterproof part of the semaphore illuminator arrangement. The light source 5 can be integrated into the plate structure or it can be a separate unit formed for the plate structure in question.

[0010] Among the plates 1 and 2, at least the outer plates 2 are made of at least partly transparent, translucent material, which is most preferably plastic. The outer plates can comprise several information surfaces, which can also be of different colours. The plates 1 and 2 and the seals 4 can be joined for example by means of glue or possibly also screws.

[0011] The structure shown in Figure 3 is otherwise similar to that shown in Figures 1 and 2, except that there is only one outer plate 2, wherefore the intermediate plate 1 can be called a backing plate.

[0012] The structure shown in Figure 4 comprises one intermediate plate 1, similarly as the structures described above, but several outer plates 2 on each side of the intermediate plate. Each plate 2 contains information, which is always visible through the overlying plate, either in a superimposed manner or in a separate field, in which case the overlying plate 2 comprises no information at this particular point.

[0013] The above description of the invention is only intended to illustrate the basic inventive concept. However, a person skilled in the art can implement the basic idea of the invention in various manners. Therefore the invention is not restricted to the examples described above, but the details thereof can vary within the scope of the appended claims.

Claims

1. A semaphore illuminator, which comprises at least two superimposed plates (1, 2), at least one of

which contains information, and a light source (5) for illuminating the plate structure, **characterized in that** the plates (1, 2) are spaced apart by means of seals (3) arranged between the plate edges to close, in a watertight manner, an intermediate space (4) formed between two adjacent plates. 5

2. A semaphore illuminator according to claim 1, **characterized in that** it comprises a backing plate (1) and a front plate (2) arranged on one side thereof. 10

3. A semaphore illuminator according to claim 1, **characterized in that** it comprises an intermediate plate (1) and outer plates (2) arranged on both sides thereof. 15

4. A semaphore illuminator according to claim 1, **characterized in that** it comprises a structure of several intermediate plates and outer plates (1, 2). 20

5. A semaphore illuminator according to any one of claims 2 to 5, **characterized in that** at least the front plate or the outer plates and the outermost intermediate plates (1, 2) are at least partly transparent. 25

6. A semaphore illuminator according to any one of the preceding claims, **characterized in that** one plate (1, 2) comprises several different information fields. 30

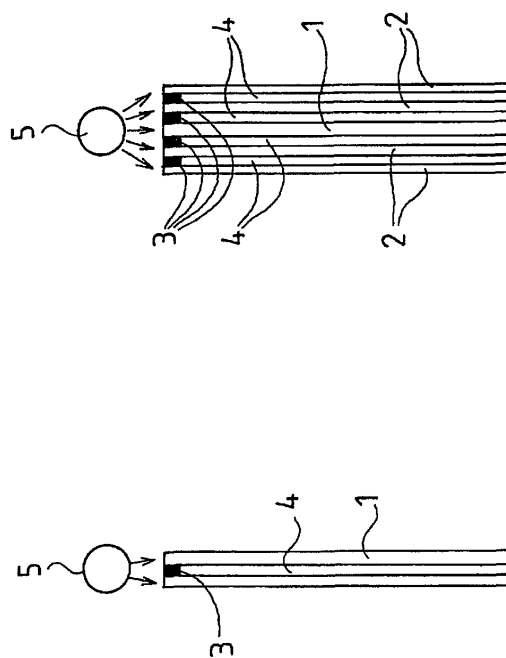
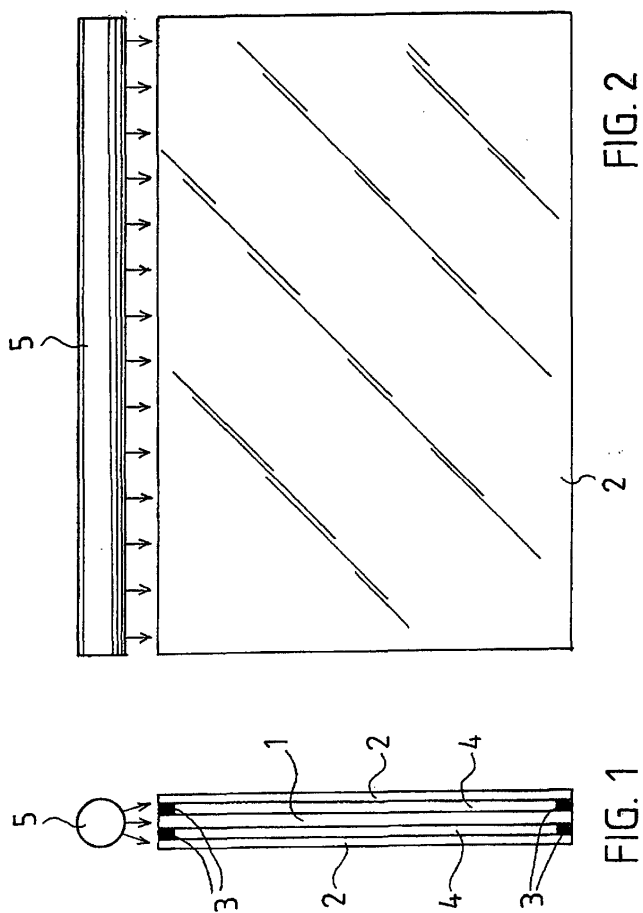
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EUROPEAN SEARCH REPORT

Application Number
EP 01 00 0741

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.7)
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Y	* the whole document *	4	B61L9/00
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Y	* column 6, line 12 - column 8, line 8; figure 4 *	4	

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A	US 2 039 998 A (HOLLISTER WILLIAM C) 5 May 1936 (1936-05-05) * the whole document *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		7 March 2002	Reekmans, 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	

EPO FORM 1503 03/82 (P04/G01)

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

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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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