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(71) Applicant: MARINE ALUMINIUM AS [NO/NO]; Postboks 134, 4299 Avaldsnes (NO).

(72) Inventors: HUSE, Per, Kjartan; Harald Gilles vei 22, 4633 Kristiansand (NO). FRØKEDAL, Arild; Tittelsnesvegen 713, 5554 Valevåg (NO). ROVIK, Kjetil; Rundhaugv. 53, 4250 Kopervik (NO).

(74) Agent: HÅMSØ PATENTBYRÅ ANS; P.O. Box 171, 4302 Sandnes (NO).

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(54) Title: ELONGATED SUPPORT BOARD

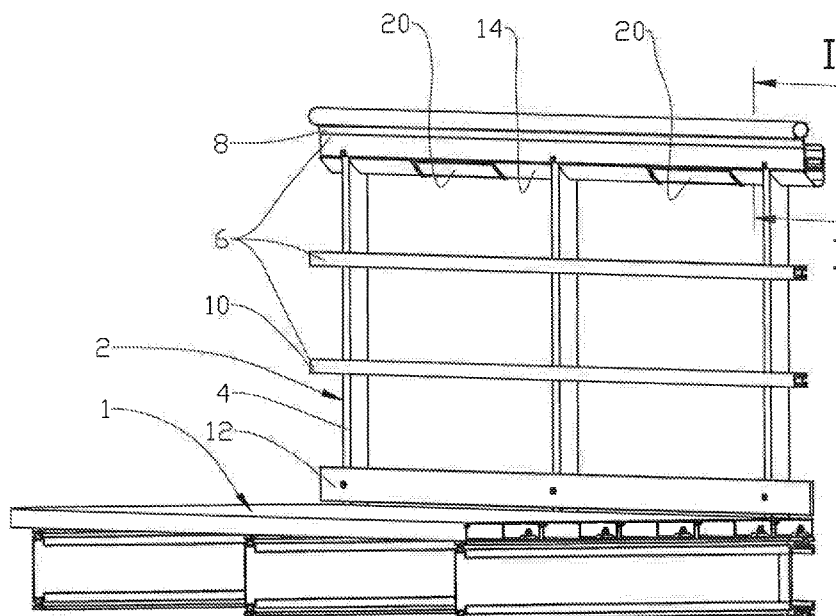


Fig. 1

(57) Abstract: An elongated support board (6) in association with a walkway (1), wherein the elongated support board (6) consists of a handrail (8), a knee rail (10) or the like, and wherein the elongated support board (6) is provided with a lighting-fixture rail (14) extending in the longitudinal direction for the attachment of a lighting fixture (20).

## ELONGATED SUPPORT BOARD

This invention deals with an elongated support board. More particularly, it relates to an elongated support board in association with a walkway, the elongated support board consisting of a handrail, a knee rail or the like.

- 5 The terminology in this document is in line with the terms used in DSB 41.6 (DSB = the Norwegian Directorate for Civil Protection) "Protection against accidents in industrial work space,...". The term "walkway" denotes any place in which persons walk or stay and in which it is relevant to use an elongated support board. This includes gangways, stairways, landings, floors, platforms or decks.

- 10 In some situations, it is necessary to arrange lighting at walkways. A non-limiting example is external gangways in industrial facilities in which other lighting does not provide sufficient illumination to safeguard traffic or work on or from the walkway. Another example may be external stairways on buildings.

It is known to arrange individual brackets for lighting fixtures on or at railings to fix necessary lighting. It is also known to arrange cable racks on a railing or wall near the support board.

- 15 Individual brackets for lighting fixtures constitute a considerable extra cost in this connection and may also be aesthetically unfortunate.

The invention has for its object to remedy or reduce at least one of the drawbacks of the prior art or at least provide a useful alternative to the prior art.

- 20 The object is achieved through the features, which are specified in the description below and in the claims that follow.

Walkways of the kind in question here are typically provided with a handrail. In the case of a railing, there is usually also at least one knee rail. The handrail and the knee rail have been given the collective name of support board.

- 25 By providing the support board with an elongated lighting-fixture rail which is suitable for carrying lighting fixtures and which may also constitute a necessary cable rack, the installation work di-

rected towards lighting may be considerably simplified while, at the same time, the appearance is improved.

The invention is defined by the independent claim. The dependent claims define advantageous embodiments of the invention.

- 5 The invention relates more specifically to an elongated support board in association with a walkway, the elongated support board consisting of a handrail, a knee rail or the like, characterized by the elongated support board being provided with a lighting-fixture rail extending in the longitudinal direction for the attachment of a lighting fixture.

- 10 The support board forms a support for persons and does not include mere cable racks often extending along a railing, for example.

The lighting-fixture rail may constitute part of the support board or be an addition to the support board. For reasons of production and also for easy installation of necessary cables in the support board, the lighting-fixture rail, in a preferred embodiment, constitutes a separate profile which is attached to the support board by snap connections.

- 15 At least the elongated support board or the lighting-fixture rail is formed of a profile, maybe an extruded one. Extrusion is an efficient production method for producing relatively complicated profiles, especially in light metal, such as aluminium.

The support board may constitute part of a railing or be attached to a wall, for example. The walkway may be permanent or temporary. By temporary is meant, here, up to a couple of years' time.

- 20 The walkway may include a stairway, be sloping in the direction of walking or have other designs suitable for a walkway. The walkway may be on, above or below the ground. It may be a constructed one or consist of the ground.

The elongated support board according to the invention solves a long-felt problem in a reasonable and aesthetically superior way.

- 25 In what follows, examples of preferred embodiments are described, which are visualized in the accompanying drawings, in which:

Figure 1 shows a section of a walkway with a railing, the handrail of the railing being formed in accordance with the invention;

Figure 2 shows a cross section of a handrail on a larger scale;

- 30 Figure 3 shows a section I-I of figure 1;

Figure 4 shows a section of a handrail in an alternative embodiment; and

Figure 5 shows an additional piece of equipment for the handrail of figure 4.

In the drawings, the reference numeral 1 indicates a walkway with a railing 2 which is attached to the walkway 1 here. The railing 2 includes vertical support posts 4 and a number of elongated support boards 6 in the form of a handrail 8 and several knee rails 10. The railing 2 also includes a toe board 12.

Figure 2 shows an elongated support board 6 in the form of a handrail 8 which is made with a lighting-fixture rail 14 extending in the longitudinal direction. The lighting-fixture rail 14, which, in this exemplary embodiment, is made as part of the support board 6, is provided with lighting-fixture brackets 16. The cavities 18 formed may be used for carrying cables, for example.

Figure 3 shows a section I-I of figure 1. Here, the support board 6 is made as an extruded profile and the lighting-fixture rail 14 as a profile extruded separately and complementarily suitable for "clicking" into the support board 6, that is to say being held fixed by snap connections. Here, the lighting-fixture rail 14 constitutes an addition to the support board 6.

A number of lighting fixtures 20 are arranged along the support board 6. The lighting fixture 20 is shown here as recessed into the lighting-fixture rail 14 and may be designed to be "clicked" into the lighting-fixture rail 14 by means of fastening means not shown.

In an alternative embodiment, see figure 4, in which the lighting-fixture rail 14 is formed as a separate profile to be attached to the support board 6, cables 22 that are carried in one of the cavities 18 of the support board 6 are shown.

Figure 5 shows the support board 6 in which a closing accessory 24 is arranged, for use in areas where lighting fixtures 20 are not needed.

The use of the verb "to comprise" and its different forms does not exclude the presence of elements or steps that are not mentioned in the claims. The indefinite article "a" or "an" before an element does not exclude the presence of several such elements.

The fact that some features are indicated in mutually different dependent claims does not indicate that a combination of these features cannot be used with advantage.

## C l a i m s

1. An elongated support board (6) in association with a walkway (1), the elongated support board (6) consisting of a handrail (8), a knee rail (10) or the like, c h a r a c -  
t e r i z e d i n that the elongated support board (6) is provided with a lighting-  
5 fixture rail (14) extending in the longitudinal direction for the attachment of a lighting fix-  
ture (20).
2. The elongated support board (6) according to claim 1, wherein the lighting-fixture rail  
(14) constitutes part of the support board (6).
3. The elongated support board (6) according to claim 1, wherein the lighting-fixture rail  
10 (14) forms an addition to the support board (6).
4. The elongated support board (6) according to any one of the preceding claims, wherein  
at least one of the support board (6) or the lighting-fixture rail (16) constitutes a profile.
5. The elongated support board (6) according to claim 4, wherein the profile is extruded.
6. The elongated support board (6) according to any one of the preceding claims, wherein  
15 the support board (6) forms part of a railing (2).
7. The elongated support board (6) according to any one of the preceding claims, wherein  
the walkway (1) is permanent.
8. The elongated support board (6) according to any one of claims 1-7, wherein the walk-  
way (1) is temporary.
- 20 9. The elongated support board (6) according to any one of the preceding claims, wherein  
the walkway (1) comprises a stairway.
10. The elongated support board (6) according to any one of the preceding claims, wherein  
the walkway (1) is on the ground.



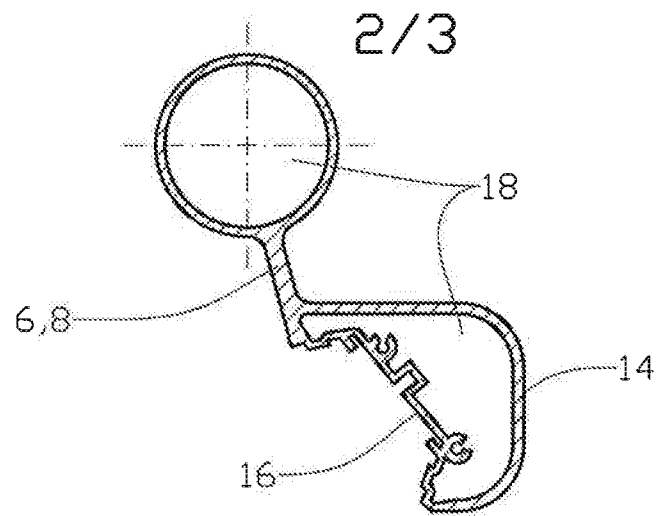
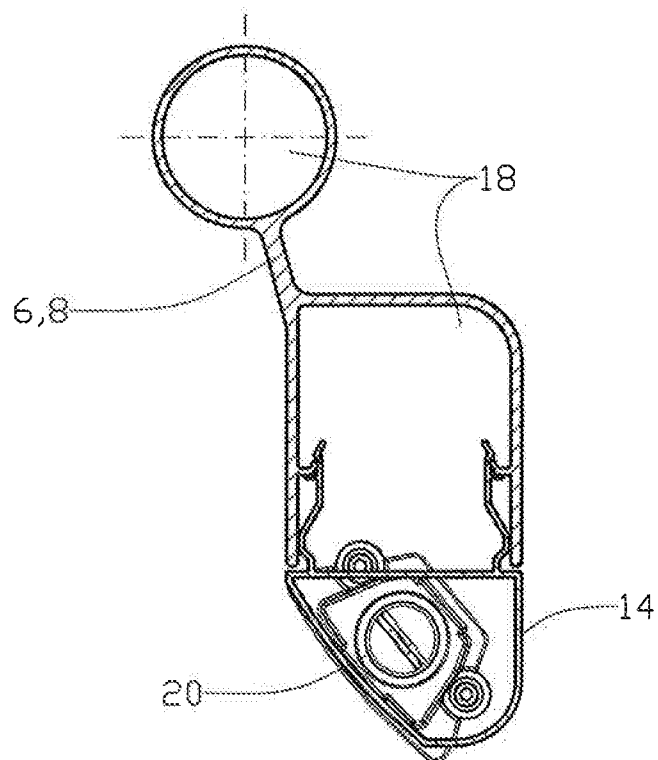


Fig. 2



I-I

Fig. 3

3/3

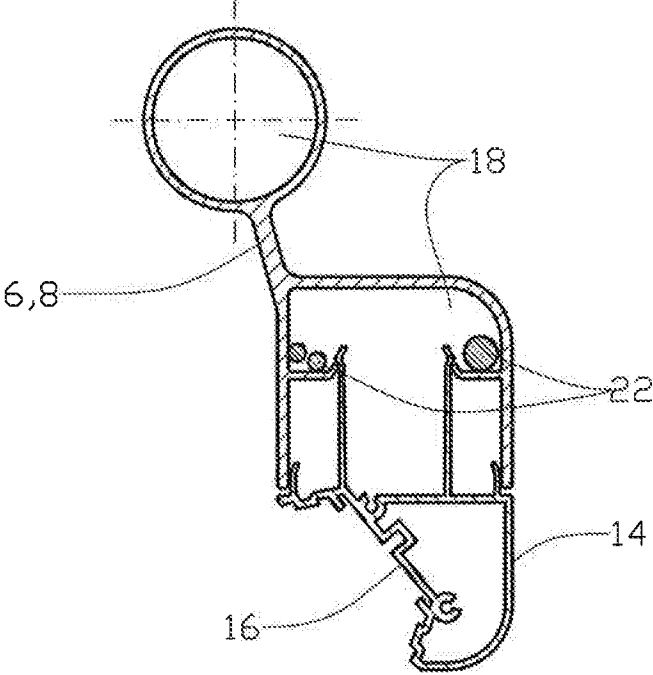


Fig. 4

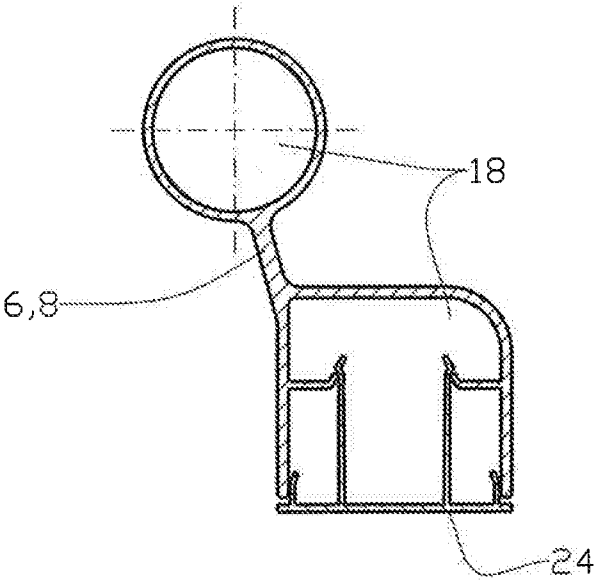


Fig. 5

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/NO2016/050127

| <b>A. CLASSIFICATION OF SUBJECT MATTER</b><br>E04F 11/18 (2006.01), F21V 33/00 (2006.01), F21S 4/20 (2016.01)<br>According to International Patent Classification (IPC) or to both national classification and IPC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                       |                                                                          |
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| <b>B. FIELDS SEARCHED</b><br>Minimum documentation searched (classification system followed by classification symbols)<br><b>IPC: E04F, F21V, F21S</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                       |                                                                          |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched<br>DK, NO, SE, FI: Classes as above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                       |                                                                          |
| Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)<br><b>WPI, EPODOC</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                       |                                                                          |
| <b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                       |                                                                          |
| Category*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Citation of document, with indication, where appropriate, of the relevant passages                                    | Relevant to claim No.                                                    |
| X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | US 4161769 A (ZIMMERMAN METALS INC) 1979.07.17<br>Abstract; column 1, lines 45-46; column 2, lines 51-66; figures 1-3 | 1, 3-10                                                                  |
| Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                       | 2                                                                        |
| Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | US 4858087 A (VANDE SANDE LEE) 1989.08.15<br>Abstract; column 3, lines 5-10; column 8, lines 18-40; figure 15         | 2                                                                        |
| <input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                       |                                                                          |
| * Special categories of cited documents:<br>“A” document defining the general state of the art which is not considered to be of particular relevance<br>“E” earlier application or patent but published on or after the international filing date<br>“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)<br>“O” document referring to an oral disclosure, use, exhibition or other means<br>“P” document published prior to the international filing date but later than the priority date claimed<br>“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<br>“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<br>“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art<br>“&” document member of the same patent family |                                                                                                                       |                                                                          |
| Date of the actual completion of the international search                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                       | Date of mailing of the international search report                       |
| 24/08/2016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                       | 26/08/2016                                                               |
| Name and mailing address of the ISA<br>Nordic Patent Institute<br>Helgeshøj Allé 81<br>DK - 2630 Taastrup, Denmark.<br>Facsimile No. + 45 43 50 80 08                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                       | Authorized officer<br><br>Ingvild Røger<br>Telephone No. +47 22 38 75 71 |

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/NO2016/050127

| Patent document cited in search report / Publication date |            | Patent family member(s) / Publication date |
|-----------------------------------------------------------|------------|--------------------------------------------|
| US 4161769 A                                              | 1979.07.17 | NONE                                       |
| US 4858087 A                                              | 1989.08.15 | NONE                                       |
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