

(19)



(11)

EP 4 039 914 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

10.08.2022 Bulletin 2022/32

(51) International Patent Classification (IPC):

E04H 3/16 (2006.01)

E04B 7/16 (2006.01)

E04H 4/08 (2006.01)

(21) Application number: **22155298.7**

(52) Cooperative Patent Classification (CPC):

E04H 3/165; E04H 4/086

(22) Date of filing: **06.02.2022**

(84) Designated Contracting States:

**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**

Designated Extension States:

BA ME

Designated Validation States:

KH MA MD TN

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Patent and Trademark Office

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295 01 Mnichovo Hradiste (CZ)

(30) Priority: **07.02.2021 CZ 20213852**

07.02.2021 CZ 20213852

(54) **TRAVEL DRIVE, ESPECIALLY FOR SWIMMING POOL ROOFING**

(57) A travel drive (B) especially of a swimming pool roofing (A) comprising a motor (2) with a cover and an electric power source (1). The electric power source (1) consists of a photovoltaic panel (1.) that forms a part of the motor (2) cover.

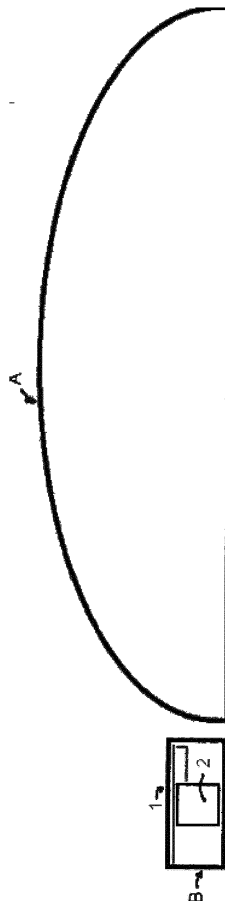


Fig. 1

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Description

Field of the Invention

[0001] The invention relates to a structure, location of a photovoltaic panel and the resulting appearance of a travel drive, usually for roofing especially of a swimming pool.

Background of the Invention

[0002] So-far, photovoltaic drives have been installed on the outside part of the equipment or externally to other surfaces. Connection between the photovoltaic panel and electronics using a cable, grommets, adaptors, etc. must usually be solved.

[0003] For the external application, it is necessary to suitably solve attachment to the given surface; these usually are special glue or structural openings for attachment into the given surface. Furthermore, the supply cable must be sufficiently long or its extension must be possible. Another issue is represented by connection to the equipment itself. Usually by connectors, adaptors, grommets.

[0004] The disadvantages of the stated solutions is a higher chance of collisions, safety of unsecured cables leading from the external location, a higher number of electronic components exposed to the outdoor environment.

[0005] So-far, the motor cover has been solved by an all-sheet-metal enclosure alternatively a supporting bottom and a formed overlap using various materials, usually laminates.

[0006] The all-sheet-metal enclosure faces problems connected with structure attachment to the product being shifted, with the product weight and with attachment of charging elements to the equipment, usually photovoltaic panels.

[0007] The supporting bottom faces problems with the structure strength because the only supporting part is the mentioned equipment bottom. To resolve the mentioned collisions, it is necessary to look for a higher bottom wall thickness or possible shaping for load bearing capacity. This is connected with extra costs and increase of the total equipment weight. Moreover, it is necessary to connect charging elements to the equipment, usually photovoltaic panels.

[0008] The disadvantages of the mentioned solutions are higher weight, lower structure strength, higher costs for material and its adjustments.

Summary of the Invention

[0009] The above stated deficiencies are substantially eliminated by a travel drive, especially of the swimming pool roofing containing a motor and an electric power source according to this invention. Its summary is that the electric power source consists of a photovoltaic panel

that forms a part of the motor cover.

[0010] In the preferred embodiment, the motor cover consists of a sheet metal bottom and a thermoplastic top part to which an electric power source consisting of a photovoltaic panel is connected, and walls from a material selected from the metal and thermoplastic group.

[0011] The photovoltaic panel is preferably composed of at least two independent parts.

[0012] In the preferred embodiment, the top motor cover part is a supporting structure of the photovoltaic panel.

[0013] The motor cover is a structurally designed part made of thermoplastic that overlaps the photovoltaic panel. The photovoltaic panel is attached from its bottom part to the stated thermoplastic. The thermoplastic can be flat or shaped, composed of more segments or of one part according to the construction needs. The photovoltaic panel can be made from one piece but also assembled from several independent parts.

[0014] In another embodiment, the designed structure that contains a bottom, sheet-metal walls and a top part is replaced by thermoplastic which is suitable as the overlap for the photovoltaic cell. The thermoplastic can be flat or shaped, composed of more segments or of one part according to the construction needs. According to the construction needs, it can also replace one or two walls.

[0015] Due to the afore-said, other elements that are either necessary or visible in the prior art can be omitted. The resulting visible state is thus clean without any other necessary elements. At the same time, it is a supporting structure that protects the photovoltaic cell.

Brief Description of the Drawings

[0016] The swimming pool roofing travel drive according to this invention will be described in more details based on a particular embodiment using attached drawings where Fig. 1 shows the roofing drive diagram, and Fig. 2 shows an exemplary embodiment of the motor cover without side walls in an axonometric view, and Fig. 3 shows the motor cover with side walls in an axonometric view.

Description of the Preferred Embodiments

[0017] The exemplary travel drive B of the swimming pool roofing A comprises a motor 2 and an electric power source 1 that consists of a photovoltaic panel that forms a part of the motor 2 cover. The photovoltaic panel can be made from one piece but can also be assembled from several independent parts.

[0018] In another embodiment, the swimming pool roofing travel drive B comprising a motor and an electric power source has a motor provided with a cover that consists of a sheet metal bottom 3 and a thermoplastic top part 4 to which the electric power source consisting of the photovoltaic panel 1 is connected, and walls from a material selected from the metal and thermoplastic group.

[0019] In yet another embodiment, the top part of the motor 2 cover is directly the supporting structure of the photovoltaic panel. The integrated photovoltaic panel consists of one part II. of shaped thermoplastic and one part of the photovoltaic panel I. Due to the afore-said, use of other elements is not necessary; however, it is not excluded.

[0020] The photovoltaic panel can be composed of more independent parts. The exemplary structure consists of a sheet metal bottom 3 and walls, usually from two pieces. Then a thermoplastic top part 4 that can be flat or shaped according to the construction needs.

Industrial Applicability

[0021] The mentioned invention can be used especially with new roofing of usually swimming pools. However, it can be applied to already installed products as well.

Claims

1. A travel drive (B) especially of a swimming pool roofing (A) comprising a motor (2) with a cover and an electric power source (1) **characterised in that** the electric power source (1) consists of a photovoltaic panel (I.) that forms a part of the motor (2) cover.
2. The travel drive (B) according to Claim 1 **characterised in that** the cover consists of a sheet metal bottom (3) and a thermoplastic top part (4) to which the electric power source (1) consisting of the photovoltaic panel (I.) is connected, and walls from a material selected from the metal and thermoplastic group.
3. The travel drive (B) according to Claim 1 or 2 **characterised in that** the photovoltaic panel (1) is located in the top part of the motor (2) cover.
4. The travel drive according to any of claims 1 to 3 **characterised in that** the photovoltaic panel (I.) is composed of at least two independent parts that are interconnected.

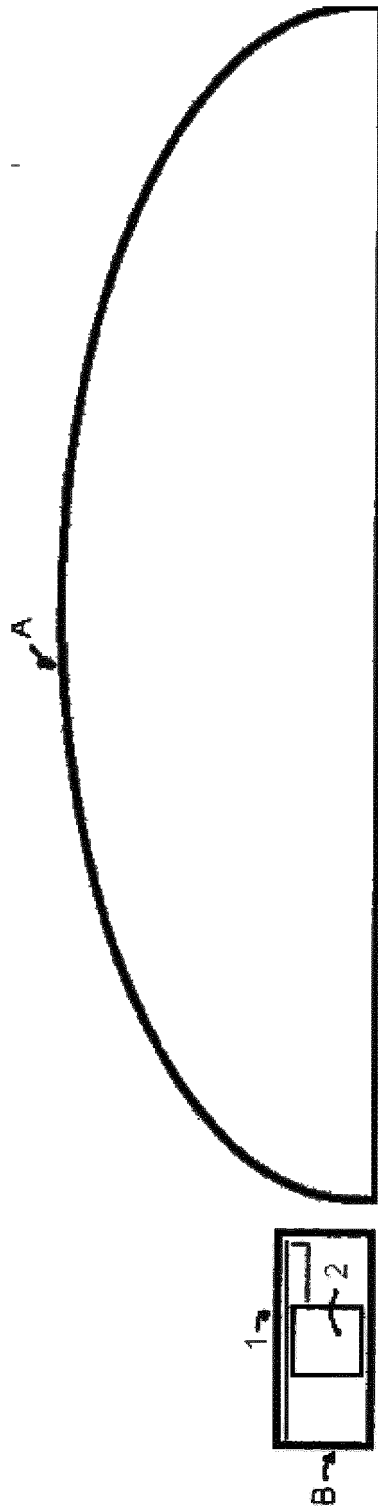


Fig. 1

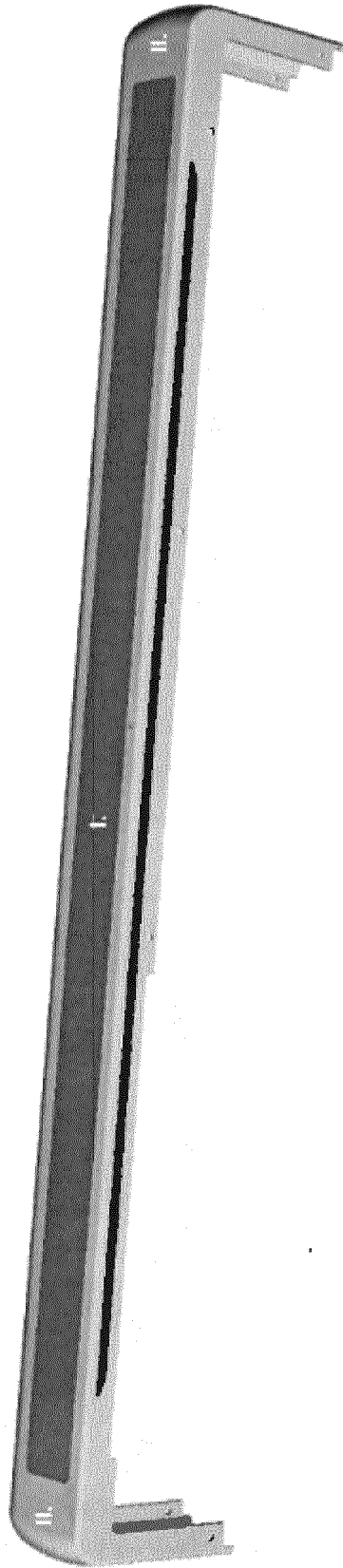


Fig. 2

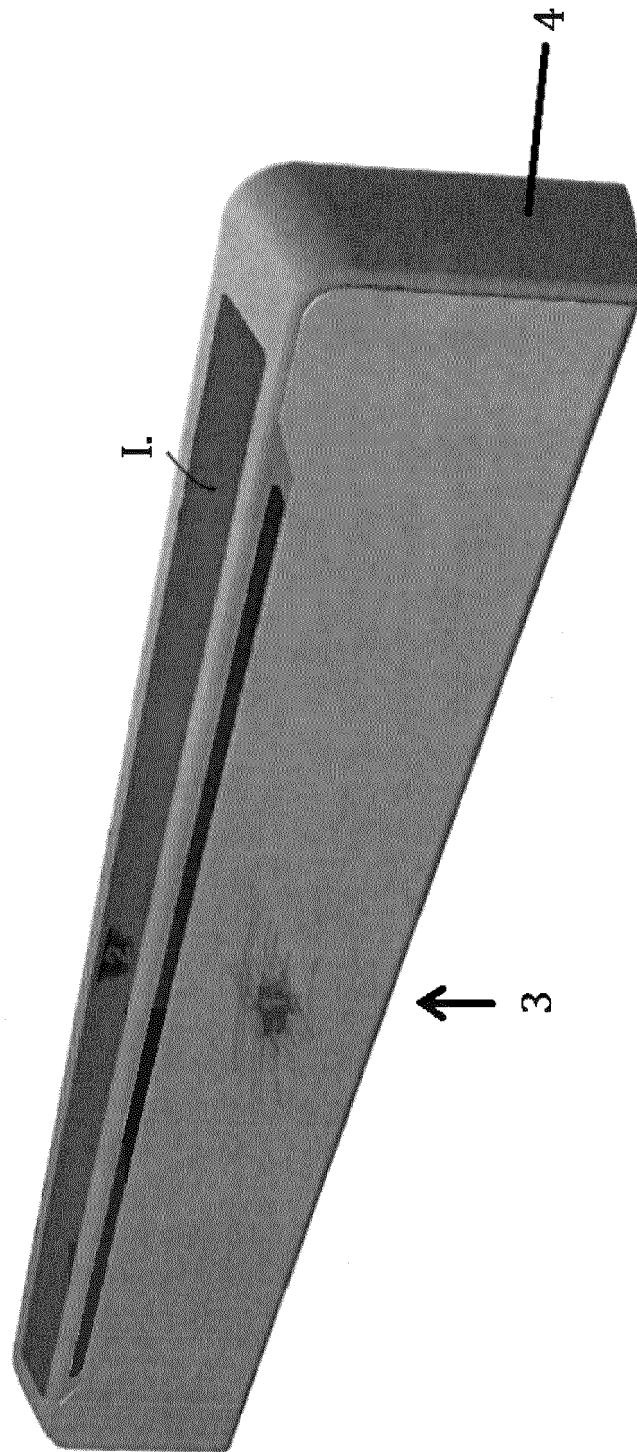


Fig. 3



EUROPEAN SEARCH REPORT

Application Number

EP 22 15 5298

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2012/072960 A1 (ABRISUD [FR]; WYSTUP FREDERIC [FR]) 7 June 2012 (2012-06-07) * page 8, lines 30-34; claims 1,11; figure 5 *	1-4	INV. E04H3/16 E04B7/16 E04H4/08
X	EP 2 690 236 A1 (ANNONAY PRODUCTIONS FRANCE [FR]) 29 January 2014 (2014-01-29) * claims 1,6; figures 1-4 *	1-4	
X	FR 3 081 901 A1 (CHORIN CHRISTIAN [FR]) 6 December 2019 (2019-12-06) * page 4, lines 15-25; figure 1 *	1-4	
A	FR 2 877 962 A1 (BONDUE OLIVIER [FR]) 19 May 2006 (2006-05-19) * claims 1,5; figure 1 *	4	
			TECHNICAL FIELDS SEARCHED (IPC)
			E04H E04B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
Munich		20 May 2022	Rosborough, John
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			

**ANNEX TO THE EUROPEAN SEARCH REPORT
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5 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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