



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
02.08.2023 Bulletin 2023/31

(51) International Patent Classification (IPC):
B66B 19/00 (2006.01)

(21) Application number: **22154423.2**

(52) Cooperative Patent Classification (CPC):
B66B 19/005

(22) Date of filing: **01.02.2022**

(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

(71) Applicant: **Kleemann Hellas SA**
61100 Kilkis (GR)

(72) Inventor: **Chatziparasidis, Iraklis**
56727 Neapoli (GR)

(54) **MULTIFUNCTIONAL ELEVATOR MACHINE CASE**

(57) This is an invention that refers to a multifunctional elevator machine case. The presented case is functional from the packaging moment until even the using phase of the product. Overall, the same structure acts as protection case, packaging material, transportation

assistant and installation component. The case consists of a base (4) with rolling elements (10), of at least two structural elements (1) on the upper side, at least four struts (2) lengthwise and grippers (3) at the two ends of the structural elements (1).

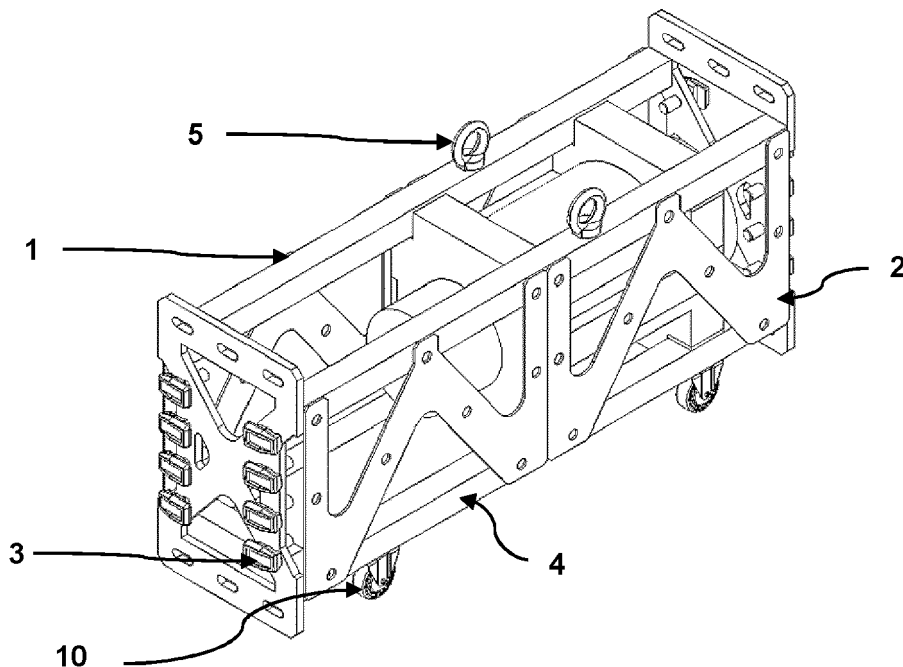


Figure 1

Description

[0001] Present invention refers to a multifunctional elevator machine case. The presented case is functional from the packaging moment until even the using phase of the product. Following further details about the invention are described.

[0002] According to the state of the art, an elevator machine should be packaged properly. The mentioned package should ensure the safety of the product during its transportation from the manufacturer to the user. Moreover, since an elevator machine weights a lot, its transportation demands a kind of trolley. Finally, the machine is placed in the elevator installation which should be designed in a proper way.

[0003] The main drawback of this method is that the elevator machine is a heavy, but at the same time delicate product. It is crucial finding an easiest way of protecting, packaging, transporting, stocking and finally placing the machine in the corresponding installation.

[0004] The presented invention is a solution to the abovementioned issue. The invention refers to a machine case that is able to be used during the whole lifecycle of the product, since it has more than one functions. Following figures may further reveal the characteristics of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] The invention will become apparent to those skilled in the art with reference to the accompanying drawings, in which it is illustrated in an indicative non-limiting manner.

Figure 1 shows the main structure of the multifunctional machine case of the presented invention.

Figure 2 shows an exploded view of the presented multifunctional machine case.

Figure 3 presents a stack of multifunctional machine cases, according to the present invention.

Figure 4 presents a further embodiment of the current invention.

Figure 5 presents the sockets for accessories that are included in the structural element of the case.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0006] Referring now to the accompanying drawings, we will describe indicative applications of the multifunctional machine case of the invention, in order to make apparent its mode of operation and its advantageous features.

[0007] As is presented in Figure 1, and further the explode view of the invention in Figure 2, the main structure of the case consists of two structural elements (1) on the upper side, at least four struts (2) lengthwise and grippers (3) at the two ends of the structural elements (1). It further

consists of a base (4) with at least four rolling elements (10). The first function of the case is packaging. The machine remains safe in the case that protects it. The rolling elements (10) are useful for moving easily the machine, while the suspension rings (5) on the structural elements (1) are used in order to raise it up, for example on the transportation track, on the warehouse selves or even in the installation. The buffers (6) and the side buffers (7) ensure that the motor (8) is safe in the case, Fig. 2.

[0008] Figure 3 shows an example of multifunctional machine cases which are stuck one over the other. This is a way of transporting a large number of motors (8) at the same time and afterwards store them in a compact way until their final use. Figure 4 presents the final function of the elevator case. The elevator motor (8) accompanied with the case is placed in the installation. The grippers (3) assist the fastening on the guide rails or in any other part, such as the car frame upper beam. The struts (2) are removable for easy access to the motor (8) in the occasion of necessary repairs or tasks during the installation.

[0009] Last but not least, Figure 5 presents another function of the invention. In several places of the structural elements (1) and of the struts (2) sockets for accessories (9), such as sensors and components for Internet of Things applications, are placed. By this way the elevator is able to follow up with the state-of-the-art technologies.

Claims

1. Multifunctional elevator machine case, consisting of a base (4) with rolling elements (10), of at least two structural elements (1) on the upper side, at least four struts (2) lengthwise and grippers (3) at the two ends of the structural elements (1), **characterized by** the fact that an elevator motor (8) is placed on the base (4) and is protected from above by the structural elements (1) and alongside by the struts (2).
2. Multifunctional elevator machine case, according to claim 1, **characterized by** the fact that suspension rings (5) are attached on the structural elements (1).
3. Multifunctional elevator machine case, according to claim 1, **characterized by** the fact that sockets for accessories (9) are placed on the structural elements (1) and on the struts (2).

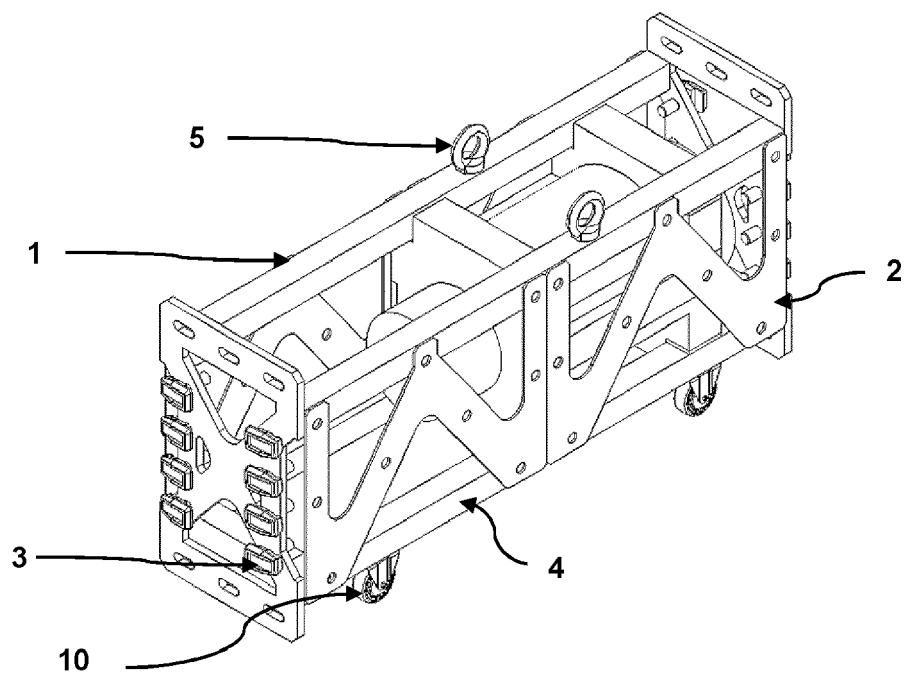


Figure 1

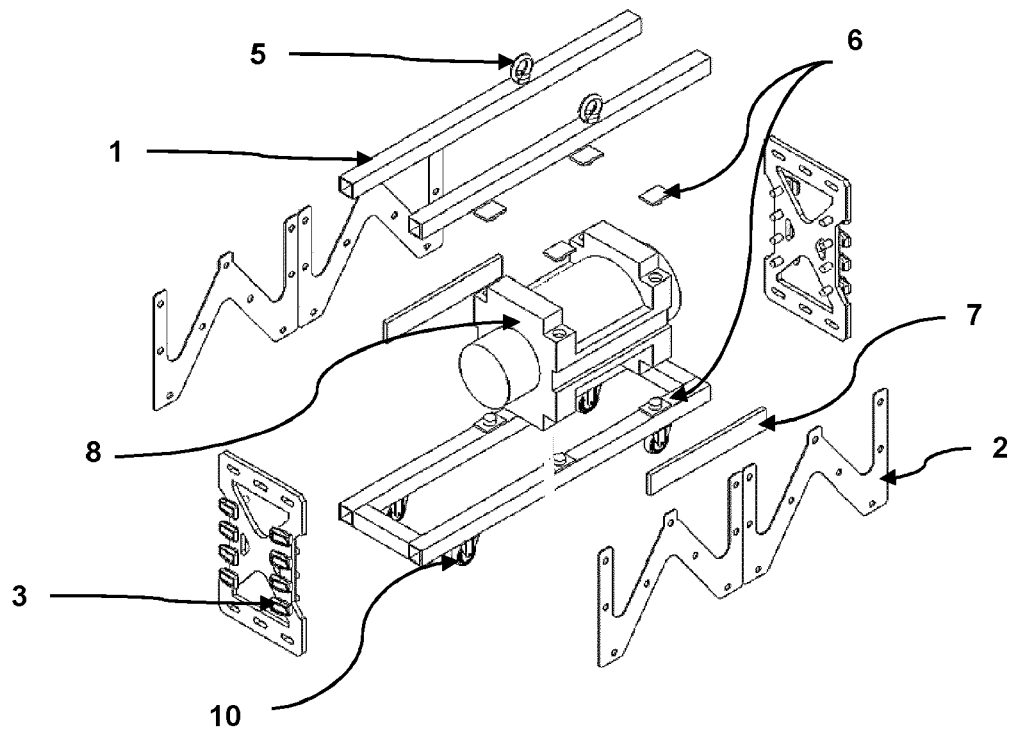


Figure 2

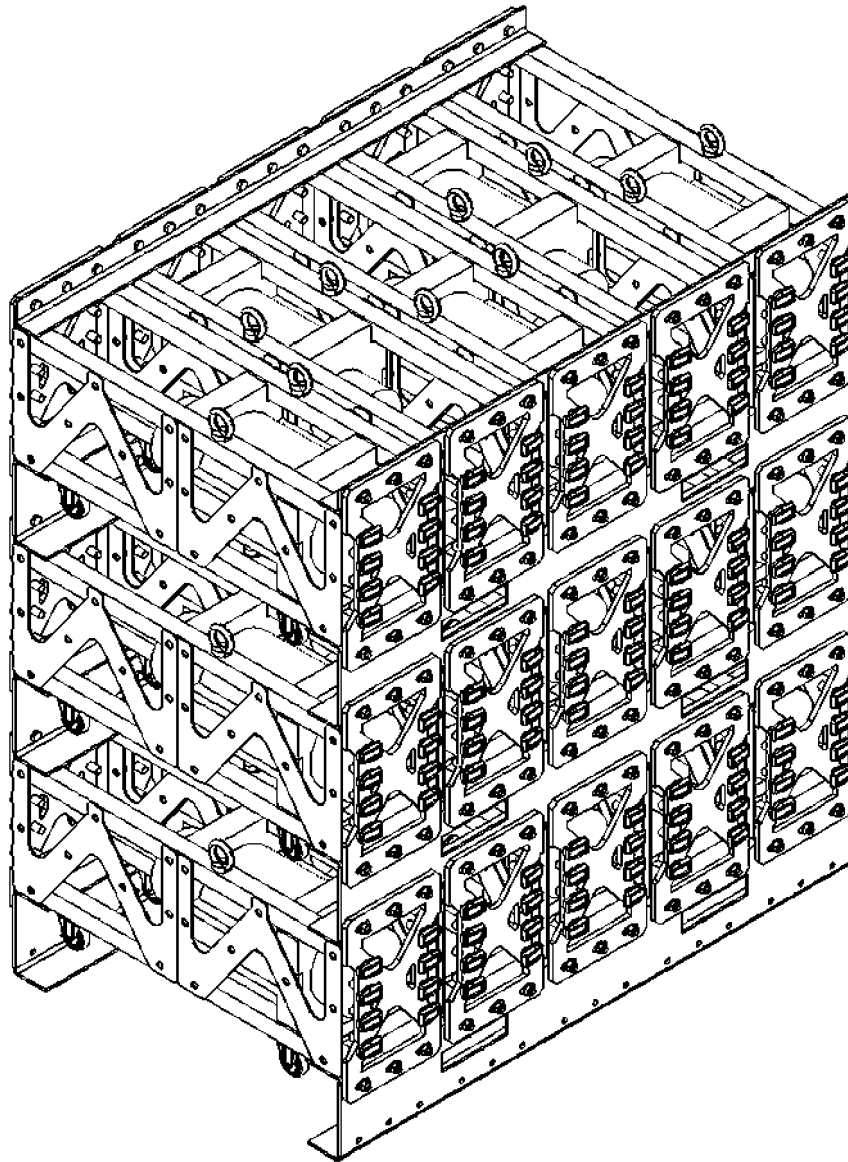


Figure 3

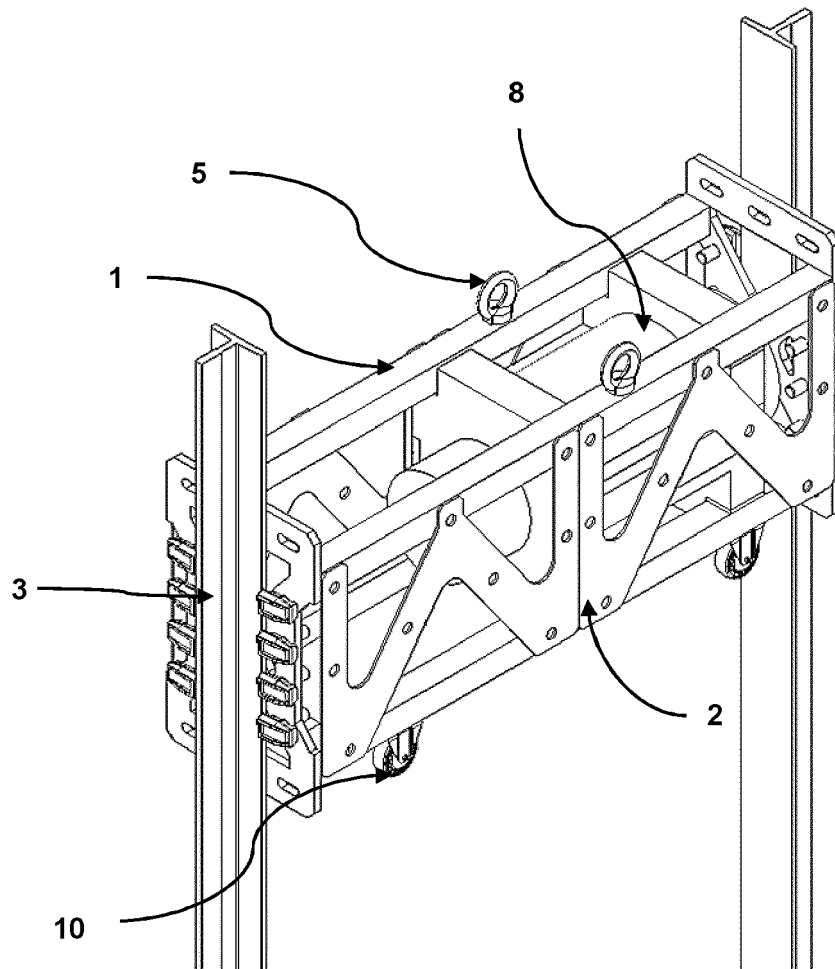


Figure 4

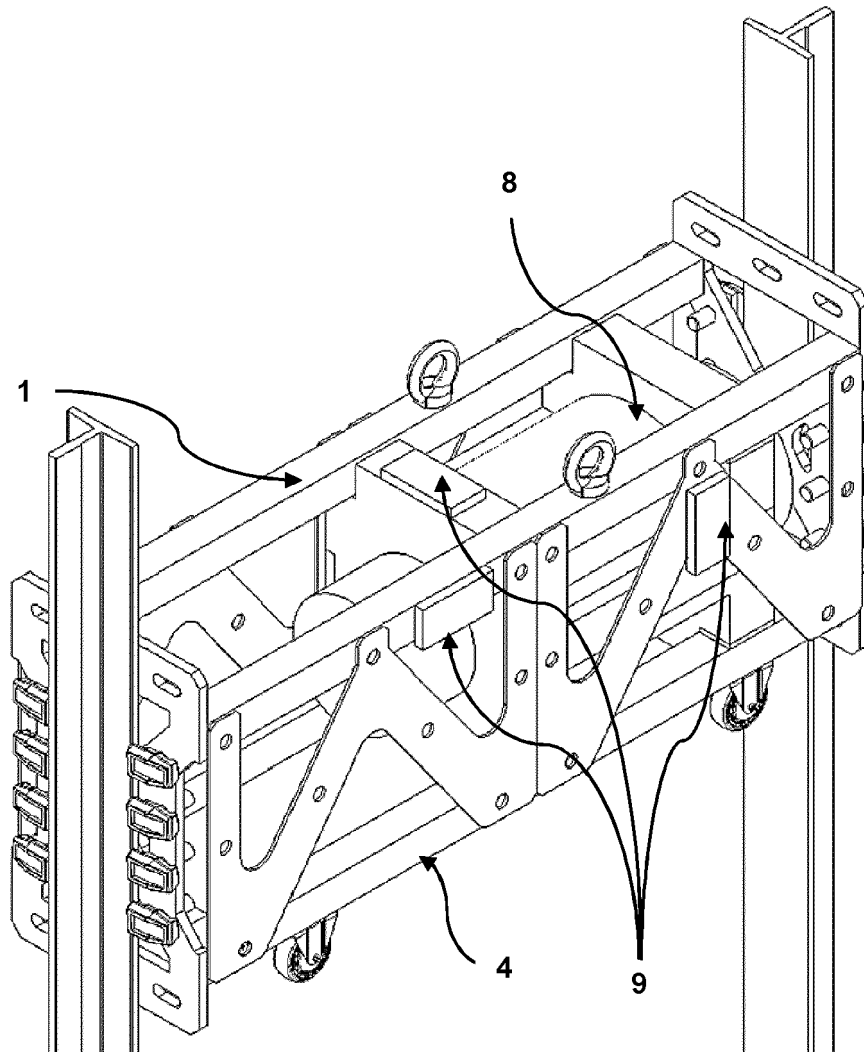


Figure 5



EUROPEAN SEARCH REPORT

Application Number

EP 22 15 4423

5

10

15

20

25

30

35

40

45

50

55

1

EPO FORM 1503 03.82 (P04C01)

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	JP 2007 230665 A (TOSHIBA ELEVATOR CO LTD) 13 September 2007 (2007-09-13) * figures 1-14 *	1-3	INV. B66B19/00
Y	JP H08 48474 A (MITSUBISHI ELECTRIC CORP) 20 February 1996 (1996-02-20) * figures 1-15 *	1-3	
A	US 2019/100419 A1 (BOWLING WILLIAM E [US] ET AL) 4 April 2019 (2019-04-04) * figures 1-10 *	1-3	
			TECHNICAL FIELDS SEARCHED (IPC)
			B66B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 17 June 2022	Examiner Szován, Levente
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
ON EUROPEAN PATENT APPLICATION NO.**

EP 22 15 4423

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-06-2022

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2007230665 A	13-09-2007	JP 4921810 B2	25-04-2012
		JP 2007230665 A	13-09-2007
JP H0848474 A	20-02-1996	JP 3092456 B2	25-09-2000
		JP H0848474 A	20-02-1996
US 2019100419 A1	04-04-2019	NONE	