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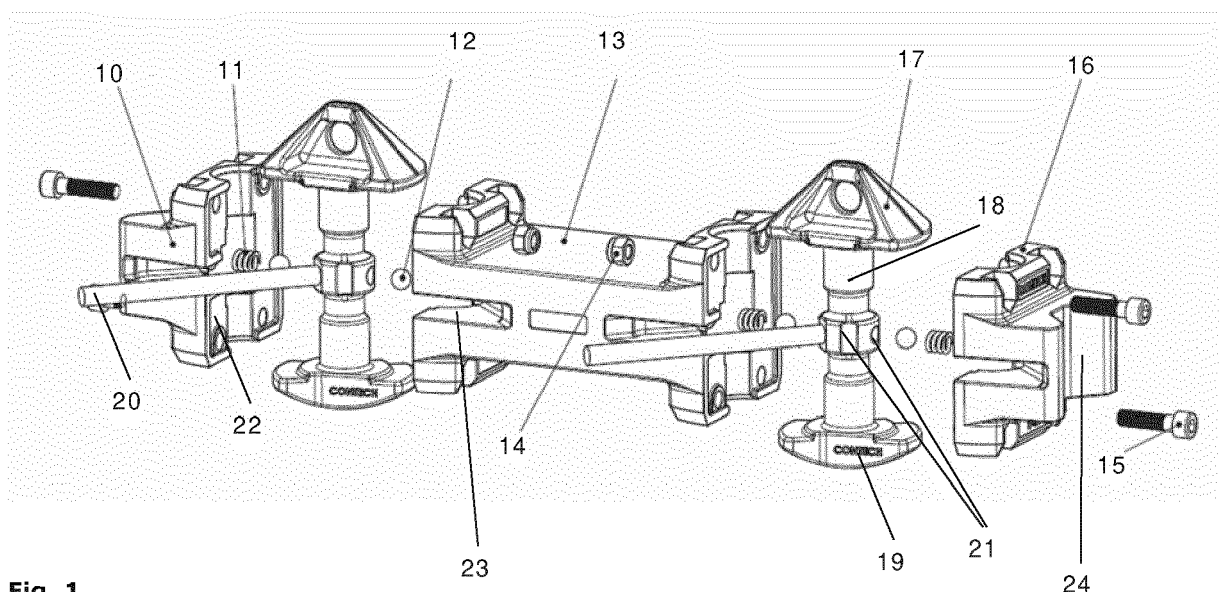
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(54) **DEVICE FOR VERTICAL AND HORIZONTAL LOAD SECURING OF STACKED CARGO AND ITS USE**

(57) The present invention relates to a device for vertical and horizontal load securing of stacked cargo comprising a housing and a first shaft (18) bearing-mounted in the housing, wherein a first end on a first side and a second end on an opposite second side project from the housing, the ends of the first shaft comprising a locking body (17) which is radially elongated with respect to the shaft and wherein the shafts are parallel. The invention also relates to a use for vertical and horizontal load securing of modular break-bulk cargo.



**Fig. 1**



## EUROPEAN SEARCH REPORT

Application Number

EP 21 20 7915

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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)
X	GB 2 476 102 A (KEY HOUSING LTD [GB]) 15 June 2011 (2011-06-15)	1-7, 11, 15	INV. B65D90/00
Y	* page 13, line 7 - page 15, line 22;	8	
A	figures 5-6 *	9	
X	WO 2017/141005 A1 (BLOK-BEAM LTD [GB]) 24 August 2017 (2017-08-24)	1-7, 11, 15	
Y	* page 11, paragraph 5 - page 13,	8	
A	paragraph 2; figures 6A-6D *	9	
X	JP S52 144997 U (.) 2 November 1977 (1977-11-02)	1, 6, 7, 11, 15	
A	* paragraphs [0001] - [0002]; figures 5, 14 *	4, 5	
Y	DE 296 09 476 U1 (MARINE EQUIP & CONSULT [DE]) 28 November 1996 (1996-11-28) * paragraph [0026] - paragraph [0053] * * figures 1-8 *	8	
A	MUENCH R: "WARNOWWERFT-ENTWICKLUNGEN AUF DEM GEBIET DES CONTAINERHANDLINGS (TEIL II)", SCHIFF UND HAFEN, SEEHAFEN VERLAG GMBH, DE, vol. 43, no. 1, 1 January 1991 (1991-01-01), XP000174237, ISSN: 1436-8498 * page 37, paragraph 1 - page 38, paragraph 2; figures 1-4 *	8, 9	TECHNICAL FIELDS SEARCHED (IPC)  B65D
A	US 6 113 305 A (TAKAGUCHI HIROYUKI [JP]) 5 September 2000 (2000-09-05) * column 3, lines 14-28 * * figures 1-3B *	4, 5, 9	
The present search report has been drawn up for all claims			
Place of search <b>Munich</b>		Date of completion of the search <b>20 January 2022</b>	Examiner <b>Leijten, René</b>
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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**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

**see sheet B**

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

**1-9, 11, 15**

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



# LACK OF UNITY OF INVENTION SHEET B

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

## 1. claims: 1-9, 11, 15

Device for vertical and horizontal load securing having a first and a second twist lock.

### 1.1. claims: 2-5

Device having a handle and a slot.

### 1.2. claims: 6-9

Device comprising separable parts.

### 1.3. claim: 11

Device wherein a central cross-section along the longitudinal direction of the locking body is conical.

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## 2. claim: 10

Device wherein the angle between the longitudinal direction of the locking body at the first end and the longitudinal direction of the locking body at the second end is at least 15° and at most 30°.

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## 3. claims: 12, 14

Device with weight reducing locking body or recess.

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## 4. claim: 13

Device having a beam-shaped collar.

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Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

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

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

20-01-2022

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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