(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 2 133 284 B1

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
04.04.2012 Bulletin 2012/14

(21) Application number: **09468004.8**

(22) Date of filing: **12.06.2009**

(51) Int Cl.:
B65D 71/70 *(2006.01)* ***B65H 49/38*** *(2006.01)*
B65H 75/18 *(2006.01)* *B65D 19/38* *(2006.01)*

(54) **Holder of a textile bobbin**

Halter für eine Textilspule

Support pour une bobine textile

(84) Designated Contracting States:
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 SE SI SK TR

(30) Priority: **13.06.2008 SI 200800151**

(43) Date of publication of application:
16.12.2009 Bulletin 2009/51

(73) Proprietor: **Rajster, Ales**
1231 Ljubljana - Crnuce (SI)

(72) Inventor: **Rajster, Ales**
1231 Ljubljana - Crnuce (SI)

(74) Representative: **Ivancic, Bojan**
Inventio d.o.o.
Dolenjska cesta 11
P.O. Box 2410
1001 Ljubljana (SI)

(56) References cited:
DE-U1- 9 403 816
GB-A- 2 252 293
US-A- 4 482 051
US-A- 5 351 825

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 2 133 284 B1

Printed by Jouve, 75001 PARIS (FR)

Description

Subject of Invention

[0001] The subject of the invention is a holder of a textile bobbin for pallet transport, preferably by trucks.

Technical Problem

[0002] A technical problem solved by the present invention is how to configure such holder of a textile bobbin for pallet transport that will be stiffly positioned on a pallet panel and will have a considerably smaller volume of return pallet package, the constituent part of which is also a holder as the subject of the present invention under the preservation of all other properties of the holder itself and the pallet as a whole that are expected and needed in arranging bobbins on pallets, in all types of transport of pallets with bobbins as well as in the transfer of bobbins from pallets to weaving machine. The holder must allow for a repeated use of a pallet of this type. The holder of the present invention should be manufactured for a market acceptable, i.e. competitive price.

Prior Art

[0003] Holders of this type are known from patent GB 2252293 (Lin Pac Mouldings), which are characterised in that they are preferably arranged in carton panels adapted to dimensions of standard pallets. Individual bobbins are arranged between two parallel panels with holders in a way that both ends of bobbin tubes are fastened each by two holders arranged on the same imaginary axis and on two adjacent plates. Each holder is double, which allows for arrangement of bobbins in several levels, preferably in common height that perfectly fills the transport area of a truck. The holders must withstand the weight of an individual pile of bobbins even in case of thrusts that appear during road traffic and in transport with a fork truck.

[0004] *There is further known a subject of this type from* DE 94 03 816 U1 *(Thyssen Polymer GMBH).* This document discloses all features of the preamble of claim 1.

[0005] There is a need for an improvement of said holders. If the properties of said known holder are studied carefully, a disadvantage in the construction of a holder becomes evident, namely the connection of two holders in contact with one another with an intermediate panel under the consideration of angular twist of an individual holder in a panel, so that during the return transport of plates with holders and without bobbins said holders may be stapled one into another in order to assume as little transport volume as possible. Further there is a need for a simplified procedure of proper arrangement of holders onto panels based on such construction of holders that will *per* se provide for an unambiguous positioning of holders.

Solution to the Technical Problem

[0006] The set technical problem of the invention is solved by an individual holder according to claim 1. The holder is formed as a circular ring, from which derive three pins intended for the positioning and fastening of a bobbin. Said holder is configured - on the ring on the opposite side of the pins - with elements for a positive disassembling connection of adjacent pins, said pins being simultaneously also positioning elements engaging with a recess in said panel in a way that only allows for one position of said holder in said panel. A problem of a human factor in assembling is therewith solved, namely a human factor could lead to a wrong arrangement of individual holders that would render the foreseen stacking of panels with holders in return transport impossible.

[0007] The invention has yet another characteristic: the part of construction of an individual holder foreseen for the connection of holders with said panel is such that adjacent and mutually connected holders embrace said panel in a surface defining a symmetrical arrangement of both adjacent holders with respect to said surface of said panel. By taking the axial position of each holder in said panel into consideration in that the angular position of pins in said holder is determined, the symmetrical position of said holders in said plate allows for a simple and unambiguous stacking of panels with holders into stacks comprising considerably more panels with holders at a certain total height in comparison with known variants. The new solution saves room in return transport and storage.

[0008] A further characteristic of the holder lies in that an additional ring engaging with said holder is intended for positioning and fastening of said holder in the panel meant to fit to the ground in a warehouse or on a transport means. Known variants foresee other types of holder for this panel. If there are two types of holders (for the panel lying directly on the surface and for the panels located above the first panel), there are considerably more logistic conditions and requirements for the work to run smoothly than if only holders of one type and additional rings for holders for adjacent panels are used.

[0009] The characteristics of the invention will be described in more detail in the continuation of the disclosure by a description of an embodiment and referring to the enclosed drawings, showing in

Fig. 1 perspective view of a holder of the invention from the side of positioning of a bobbin;
Fig. 2 perspective view of a holder of the invention from the opposite side;
Fig. 3 perspective view of an additional ring.

[0010] A holder **1** of a textile bobbin, not shown in figures, for pallet transport, that is intended to be fastened onto a panel, not shown in figures and configured with recesses in a grid with respect to the size of bobbins in order to reach an optimal yield of said panel, is configured

of a ring **4** provided at one side with first projections **5** mutually arranged in equal angular distances. Apart from the first projections **5** there are second projections **6** corresponding in their shape to said first projections **5** in a way that said first and second projections **5** and **6** of two adjacent holders 1 arranged within the same recess mutually stack and therewith simultaneously position and fasten two neighbouring holders **1** in said panel. The recesses in said panel are of corresponding shapes and can receive each holder 1 only in one certain position.

[0011] Said first projections 5 are configured as hollow circular sections, wherein said second projections **6** are configured equally, yet relatively downsized in order to be positively connectable with said first projections **5**.

[0012] On the side of said ring **4** lying opposite said first and second projections **5** and **6** there are pins **7** arranged equidistantly between each other and with respect to the centre of said ring **4**. Said pins are preferably configured as hollow irregular truncated pyramids. From the opposite side of said ring **4** said pins **7** are hollow in a way to allow for insertion of said pins **7** of said holders **1** located on another panel, when they are in warehousing-transport position.

[0013] In order to reach adequate stiffness and as small warehousing-transport volume as possible there is a circularly running step **9** on said ring **4** on the side of said pins **7**. Said step **9** is higher in the area of said pins **7** and lower in the area between two adjacent pins **7**.

[0014] Said ring **4** disposes on the side of said first and second projections **5** and **6** also of a narrow semicircular rib **8** with a height equalling the thickness of said panel. Its semicircular shape makes said rib **8** also a positioning element of two adjacent holders **1** arranged within same recess in said panel. Semicircular ribs **8** of mutually connected holders **1** form a circular ring that unambiguously positions and fastens adjacent holders **1** in the recess together with said first and second projections **5** and **6**.

[0015] Various flat and circular ribs visible on figures are not separately described, since they are not part of the present invention. They are part of the entire construction in order to reach the highest level of stiffness of holders possible by simultaneously preserving its lowest possible weight.

[0016] As already mentioned, a further ring **10** is foreseen that is intended to engage with said holders **1** located on same panel intended for a direct positioning on the ground. Said ring **10** has a construction equal to that of said ring **4** and also disposes over same first and second projections **5** and **6** having the same function as described above.

[0017] The subject of the invention is produced from a thermoplastic material according to a known spray moulding procedure.

Claims

1. A holder **(1)** of a textile bobbin for pallet transport that is intended to be fastened onto a panel configured with recesses in a grid with respect to the size of bobbins in order to reach an optimal yield of said panel, wherein it is configured of a ring **(4)** provided at one side with pins **(7)** arranged equidistantly between each other and with respect to the centre of said ring **(4)** and on the side of said ring **(4)** lying opposite said pins **(7)** there are first projections **(5)** mutually arranged in equal angular distances, and yet second projections **(6)**, **characterised in that** said second projections **(6)** correspond in their shape to said first projections (5) in a way that said first and second projections **(5**, **6)** of two adjacent holders **(1)** arranged within the same recess in said panel mutually stack, that said first projections **(5)** are configured as hollow circular sections, wherein said second projections **(6)** are configured equally, yet relatively downsized in order to be positively connectable with said first projections **(5)** and that on said ring **(4)** on the side of said first and second projections **(5, 6)** there is a narrow semicircular rib **(8)** with a height equalling the thickness of said panel.

Patentansprüche

1. Ein Halter (1) einer Textilspule für den Palettentransport, der dafür vorgesehen ist, auf einem Panel befestigt zu werden, welches mit Aussparungen in einem Netzmuster mit Bezug auf die Größe der Spulen konfiguriert ist, um eine optimale Aufnahme des Panels zu erreichen, wobei er aus einem Ring (4) gebildet ist, der an einer Seite mit Stiften (7) versehen ist, die äquidistant zwischen einander und mit Bezug auf das Zentrum des Rings (4) angeordnet sind und wobei auf der Seite des Rings (4), die gegenüberliegend den Stiften (7) liegt, erste Vorsprünge (5) vorhanden sind, die zueinander in gleichwinkligen Abständen angeordnet sind und wobei noch zweite Vorsprünge (6) vorgesehen sind, ***gekennzeichnet dadurch,*** **dass** die zweiten Vorsprünge (6) in ihrer Form den ersten Vorsprüngen (5) in einer Weise entsprechen, dass sich die ersten und zweiten Vorsprünge (5, 6) von zwei benachbarten Haltern (1), die innerhalb derselben Aussparung in dem Panel angeordnet sind, gegenseitig stapeln, dass die ersten Vorsprünge (5) als hohle ringförmige Bereiche ausgebildet sind, wobei die zweiten Vorsprünge (6) gleich ausgebildet sind, jedoch in ihrer Größe relativ verkleinert sind, um mit den ersten Vorsprüngen (5) formschlüssig verbindbar zu sein, und dass an dem Ring (4) an der Seite der ersten und zweiten Vorsprünge (5, 6) eine enge halbkreisförmige Rippe (8) mit einer Höhe vorgesehen ist, die gleich der Dicke des Panels ist.

Revendications

1. Support (1) d'une bobine textile pour un transport sur palette, qui est destiné à être fixé sur un panneau configuré avec des renfoncements suivant une grille par rapport à la dimension des bobines afin d'atteindre un rendement optimal dudit panneau, le support étant formé d'un anneau (4) doté, sur un côté, de pattes (7) agencées à équidistance les unes des autres et par rapport au centre dudit anneau (4), et, sur le côté dudit anneau (4) se trouvant à l'opposé desdites pattes (7), se trouvent des premières saillies (5) agencées mutuellement à intervalles angulaires égaux, et également des secondes saillies (6), ***caractérisé par*** **le fait que** lesdites secondes saillies (6) correspondent de par leur forme auxdites premières saillies (5) d'une manière telle que lesdites premières et secondes saillies (5, 6) de deux supports (1) adjacents agencés à l'intérieur du même renfoncement dans ledit panneau s'emboîtent mutuellement, **par le fait que** lesdites premières saillies (5) sont configurées sous la forme de sections circulaires creuses, lesdites secondes saillies (6) étant configurées de la même manière, mais relativement réduites en dimension afin de pouvoir être reliées de manière positive auxdites premières saillies (5), et **par le fait que**, sur ledit anneau (4), sur le côté desdites premières et secondes saillies (5, 6), se trouve une nervure semi-circulaire étroite (8) ayant une hauteur égale à l'épaisseur dudit panneau.

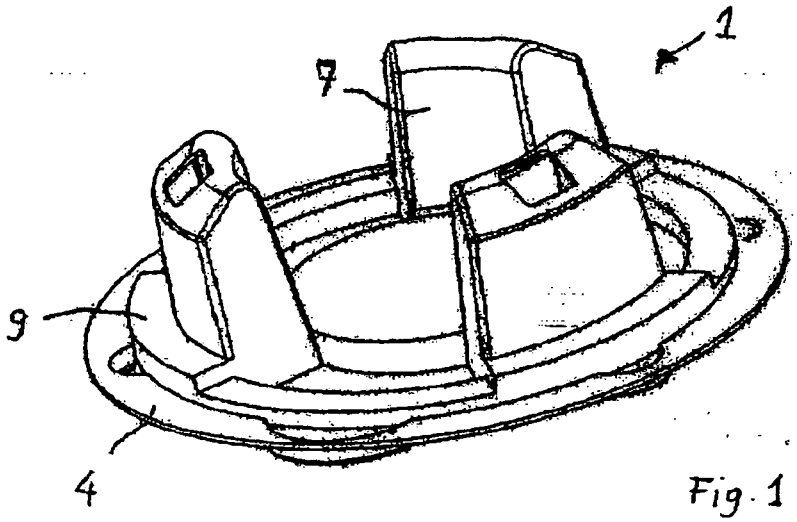


Fig. 1

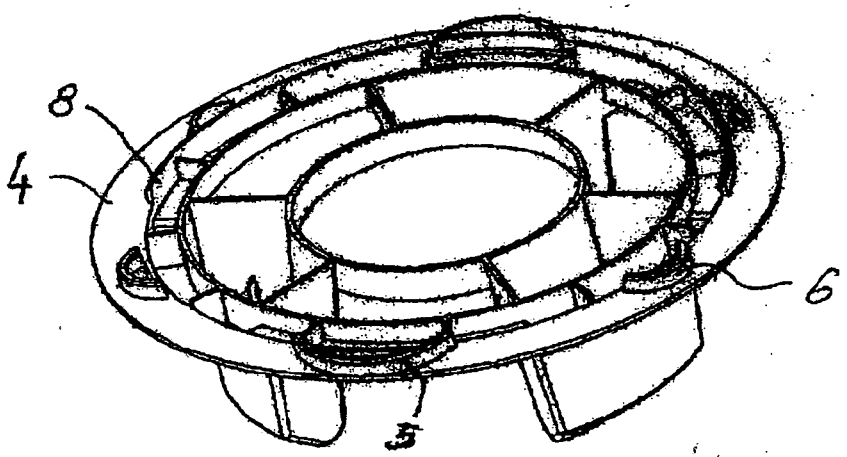


Fig. 2

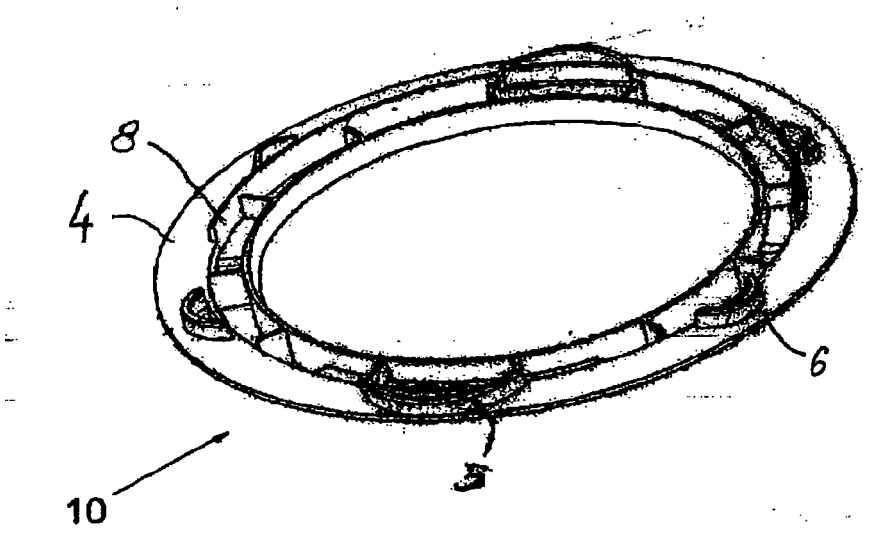


Fig.3

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- GB 2252293 A **[0003]**
- DE 9403816 U1 **[0004]**