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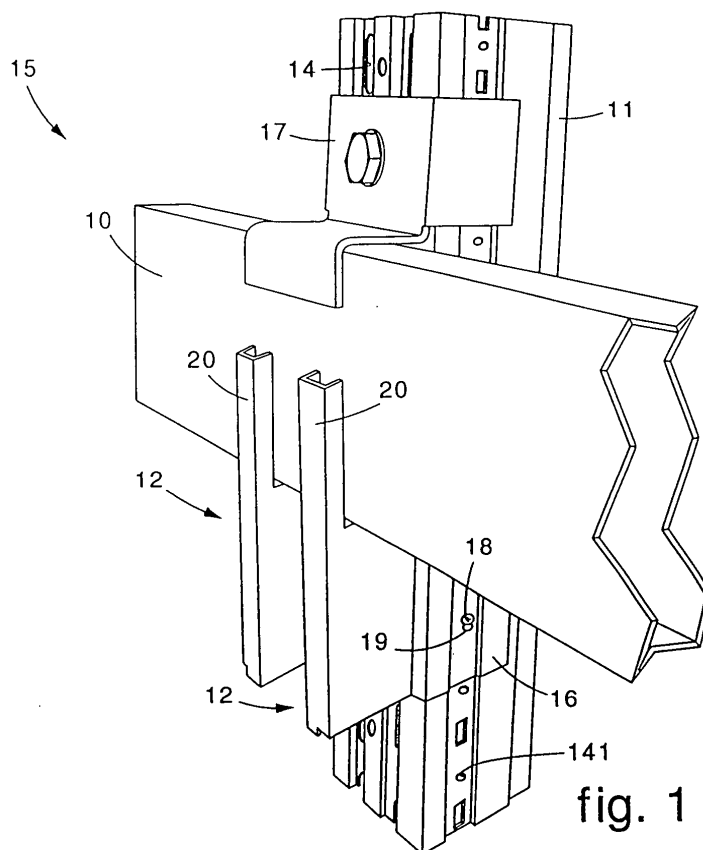
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(54) Coupling and clamping support for pallet-bearing beams

(57) Coupling and clamping support (15) for pallet-bearing beams (10), for storage warehouses, wherein the beams (10) are applied horizontally and on one side of at least two uprights (11) having at least front eyelets

(14). The support (15) is applied on the beam (10) in relation to the face located longitudinally to the storage warehouse by means of at least a tooth (13) cooperating with one front eyelet (14).



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Description

FIELD OF THE INVENTION

[0001] The invention concerns a device with a coupling and clamping support device for pallet-bearing beams in shelving systems with uprights for storage warehouses.

BACKGROUND OF THE INVENTION

[0002] The state of the art includes shelving systems with uprights on which beams are connected, at various heights, which then carry the object-bearing pallets.

[0003] The beams are normally connected to the front-end uprights.

[0004] This makes it necessary to have beams of varying lengths in the warehouse in order to be able to meet the varying storage requirements on each occasion.

SUMMARY OF THE INVENTION

[0005] According to the invention, as set forth in the main claim, it is possible to store standard beams of a desired length and then assemble them next to the upright, without being constrained by the specific pitches which separate the uprights.

[0006] Conventional front end connection means between one beam and the next allow to create continuity between the various segments of beam.

[0007] Apart from the advantage of the unsold goods, the solution according to the invention guarantees a greater stability and hence supplies greater safety during the step of handling the pallets.

[0008] In addition, it reduces the cost of the beams and the energy needs for obtaining the beams. Moreover, said beams have an uninterrupted profile and this allows them to work in a snug fit, thus ensuring a greater static bearing capacity to the structure.

[0009] The problem resolved by this solution is to attach the beam to the upright; this attachment, according to the invention, is simple, safe, fast to install and render solid with the beam.

[0010] According to the invention, which as we have said is set forth in the main claim, a coupling and clamping support is applied to the upright substantially consisting of a cradle-type support and an upper gripping element.

[0011] Said cradle-type support is anchored by means of at least a tooth in suitable eyelets present on the upright, eyelets which also serve to position the support vertically.

[0012] Said upper gripping element secures the beam, once it has been received by the cradle-type support.

[0013] As a variant, said support has at least a lateral extension which extends on the side of the upright and serves to attach the support to the upright by means of

removable means, such as for example screws or otherwise, in order to prevent the support from accidentally coming off.

[0014] According to a further variant, the support has at least one tooth per side, in order to balance the anchorage better.

[0015] According to another variant, the support is vertically divided in two and is anchored at the front, and on the two sides of the upright, so that the width of the upright is unimportant for the support.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] These characteristics and advantages of the invention will be apparent from the following description of a preferential embodiment, given as a non-restrictive example, with reference to the attached drawings wherein:

Fig. 1 shows the invention applied to a rectangular beam;

Fig. 2 shows the invention in the divided solution.

DETAILED DESCRIPTION OF PREFERENTIAL EMBODIMENT

[0017] Fig. 1 shows a coupling and clamping support 15 applied to an upright 11 which supports a beam 10.

[0018] At the front said upright 11 has eyelets 14 able to attach the coupling and clamping support 15 by means of the teeth 13 which it has for example as in Fig. 2.

[0019] In this case said coupling and clamping support 15 consists of two elements, one defining the cradle-type support 12 and one defining the upper gripping element 17.

[0020] The cradle-type support 12, in this case, is obtained from sheet metal and has a substantially U-shaped outer front part 20, able to accommodate the beam 10 and lateral extensions 16 which extend on the sides of the upright 11 and serve to attach the cradle-type support 12 to the upright 11 by means of removable means 18 such as, for example, screws or otherwise.

[0021] Fig. 2 shows the coupling and clamping support 15 in the divided solution which shows the cradle-type support 12 having a substantially U-shaped outer front part 20 wherein one side bears the teeth 13 and the other side bears the lateral extension 16.

[0022] Fig. 2 shows both the teeth 13 and also the lateral extension 16 of the coupling and clamping support 15.

[0023] In the lateral extension 16 there are holes 19 provided able to cooperate with the eyelets 14 or the holes 141 on the side of the upright 11, by means of removable means 18 such as screws or otherwise.

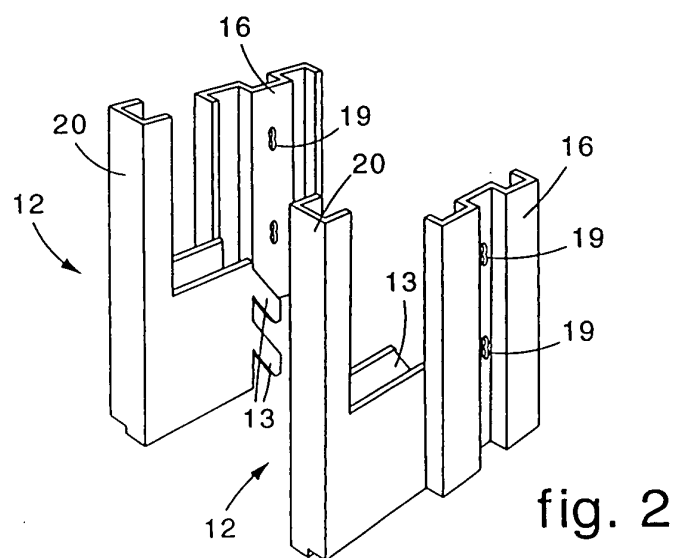
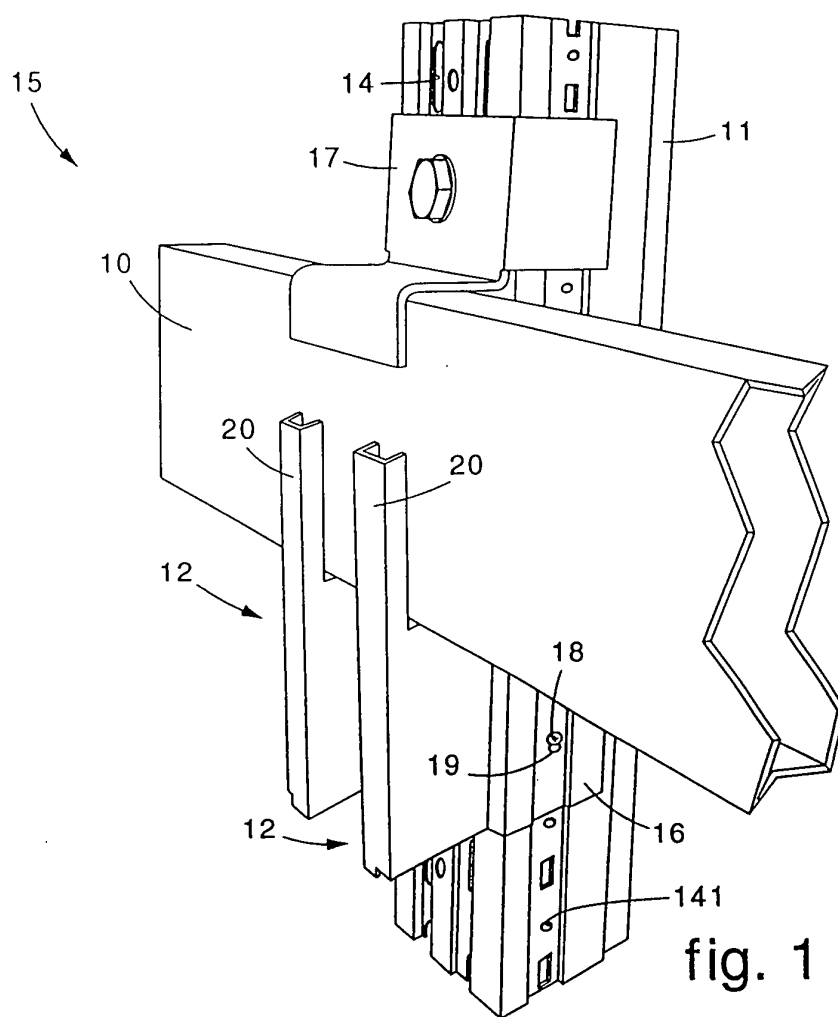
Claims

1. Coupling and clamping support for pallet-bearing beams (10), for storage warehouses, said beams (10) being applied horizontally and on one side of at least two uprights (11), said uprights (11) having at least front eyelets (14), **characterized in that** the support (15) is applied on the beam (10) in relation to the face located longitudinally to the storage warehouse by means of at least a tooth (13) cooperating with one said front eyelet (14). 5 10
2. Support as in claim 1, **characterized in that** it has at least a lateral extension (16) with at least a hole (19) cooperating with an eyelet (14), or hole (141) located in the side of the upright. 15
3. Support as in any claim hereinbefore, **characterized in that** the support (15) and the upright (11) are made solid by means of removable means (18). 20
4. Support as in any claim hereinbefore, **characterized in that** it has two vertical rows of teeth (13) cooperating with the two vertical rows of eyelets (14) present on the front of the upright (11). 25
5. Support as in any claim hereinbefore, **characterized in that** it is divided vertically into two parts.
6. Support as in any claim hereinbefore, **characterized in that** it is obtained in molded sheet metal. 30
7. Support as in any claim hereinbefore, **characterized in that** it cooperates with a gripping element (17) located above the beam (10). 35
8. Support as in claim 7, **characterized in that** the gripping element (17) has at least a stabilizing lateral extension. 40
9. Support as in claim 7 or 8, **characterized in that** the gripping element (17) is made solid with the upright (11) with removable means (18). 45

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EUROPEAN SEARCH REPORT

Application Number
EP 02 00 8704

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	FR 1 388 765 A (VALLOUREC) 3 June 1965 (1965-06-03) * page 1, column 2, line 14 - page 3, column 1, line 18 * * figures 1-4 *	1-9	A47B57/40
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7) A47B B65G
Place of search THE HAGUE		Date of completion of the search 4 July 2002	Examiner Papatheofrastou, M
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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**ANNEX TO THE EUROPEAN SEARCH REPORT
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