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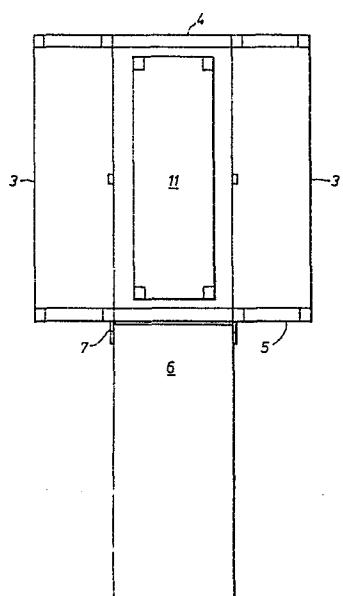
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㉙ Storage boxes.

㉚ Storage boxes particularly useful for document storage are described. They are pallet boxes, i.e. consist of a box on a pallet base (1). The box has a plurality of storage sections, at least one of which is removable as a unit to gain access to the removable unit and to the other sections. In a preferred form the removable unit is a trolley (9). The end wall of the trolley may constitute part of the box walls (5) or part of one of the box walls (6) may hinge down to provide a trolley support.



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Storage boxes

This invention relates to storage boxes.

- Large boxes, e.g. 2 m cube size, generally made of wood, are widely used in warehousing and storage for storing furniture and the like. For convenience of handling the base of such boxes is generally constructed as a pallet so that the box can be lifted by a fork lift truck to enable such boxes to be moved and stacked, e.g. 2 or 3 high in a warehouse. Such boxes are called "pallet boxes".
- 10 In the case of furniture storage, it is unusual to require to load or unload the box otherwise than entirely. However, in the case of document storage, this is not so; quite frequently the owner of the documents wants to retrieve one batch from those stored, and storage in such pallet boxes is therefore impractical. Storage is generally accordingly carried out on shelving or racking, or at least in relatively much smaller containers - e.g. teachests - which are more difficult to handle.
- 15 20 Sectional storage systems consisting of a set of storage units assembled together in a suitable frame or carrier, and in which each such unit can be withdrawn to give access to its contents are widely known, e.g. chests of drawers, filing cabinets and vertical systems of the type described in U.K. Patent Specification No.1,157,561. Such systems, however,

give only restricted access to the contents stored therein and precautions need to be taken to prevent instability, which adds to the cost of such systems. Only material stored in one of the units is generally 5 accessible at any one time.

According to the present invention there is provided a pallet box for storage consisting of a pallet base, four walls and a roof, wherein the interior of the box is divided into at least three 10 sections, each providing space for storage, and wherein at least one of the sections is in the form of a movable section, characterised in that the movable section is capable of being withdrawn from between two adjacent sections to a position in which access 15 to all three sections is possible.

Preferably, the pallet box has three sections, the central section being in the form of a trolley which can be withdrawn from between the other two sections. In such a construction, the end wall of the 20 trolley may constitute a section of one of the walls of the box. Alternatively, the centre section of one of the walls of the box may be hinged at its base enabling it to be swung down to gain access to the trolley, the swung down section then acting as a base 25 onto which the trolley may be rolled.

In such a case, the length of section is equal to the height of the box. If this length is less than that of the trolley (which is substantially the entire width of the box if all the space is to be used), then 30 the wheels of the trolley should be inset from its end sufficiently to enable the trolley to be withdrawn from between the other two storage sections and leave a gap through which a person can pass to gain access to those sections, while the wheels are still on the centre wall 35 section.

The pallet boxes of the present invention are of particular value for document storage in which case each storage section may be provided with shelves, if desired, to assist in filling them with documents, 5 usually in the form of individual cardboard boxes each full of papers. The size of such cardboard boxes should naturally be matched to the size of the storage sections in the pallet boxes. Other types of material can be stored, however, the storage sections 10 in the box being fitted out appropriately.

Means may be provided for latching the trolley in position in the box, and the box may be provided with suitable lockable closure means for security.

The invention is illustrated, by way of example, 15 with reference to the accompanying drawings, in which:

Figures 1, 2 and 3 are diagrammatic top, front and side views of a pallet box for document storage according to the invention; and

Figures 4, 5 and 6 are analogous views of an 20 alternative embodiment.

Referring first to Figures 1 to 3, the pallet box consists of a base 1 having an upper floor and base members defining apertures 2 into which the fork of a forklift truck can be inserted. Set on the base 25 are to side walls 3, a rear wall 4 and a front wall 5. The centre section 6 of front wall 5 is hinged to the base 1 at 7, and can thus be swung down to the position shown in Figures 1 and 3.

In the interior of the box, shelving 8 is 30 provided on walls 3, the shelving running the entire width of these walls. Located between the two sets of shelving 8 is a trolley 9 consisting of a base 10 with four uprights at its corners supporting shelves 11, and with nylon wheels 12. Wooden beading 13 serves to keep 35 the trolley wheels running straight, and from running off the end of section 6. Handles 14 are mounted on

two of the end uprights of the trolley to assist in pulling it from and pushing it into a position between the two sets of shelving.8.

The outside of wall sections 6 bears two hinged 5 rails 15 which lie flat against section 6 when the section is flush with the rest of wall 5, and which are swung out to provide support rails when section 6 is lowered. Each rail 15 has a square-section hole through it and a wooden rod 16 passes through both to 10 hold the rails in position when the section is in its hinged-down position.

In its inserted position the trolley 9 may be held in position by any convenient means, or merely by being a tight fit. If desired, tapered wedges 15 may be mounted on the trolley to centre it firmly as it is pushed finally in. In addition, once it has been pushed in one or more wedge or chock members may be placed against its wheels nearest section 6.

The dimensions of the unit are not critical, 20 though for convenience all boxes of any one storage contractor will usually be the same size. Typically the unit will be about 2 m square and 2.5 m high.

Referring now to Figures 4 to 6, the pallet box there shown is similar to that of Figures 1 to 3, 25 but in place of a hingeing wall section, a wall section 20 constitutes one end of trolley 9. A separate platform 21 is provided on which to move trolley 9 when access to material stored is needed. Platform 21 is, of course, the same height as base 1 from the 30 ground, and can be temporarily held against base 1, e.g. by suitable clips or catches. Otherwise, operation and construction is as for the first embodiment, and the same reference numerals are given to its corresponding parts.

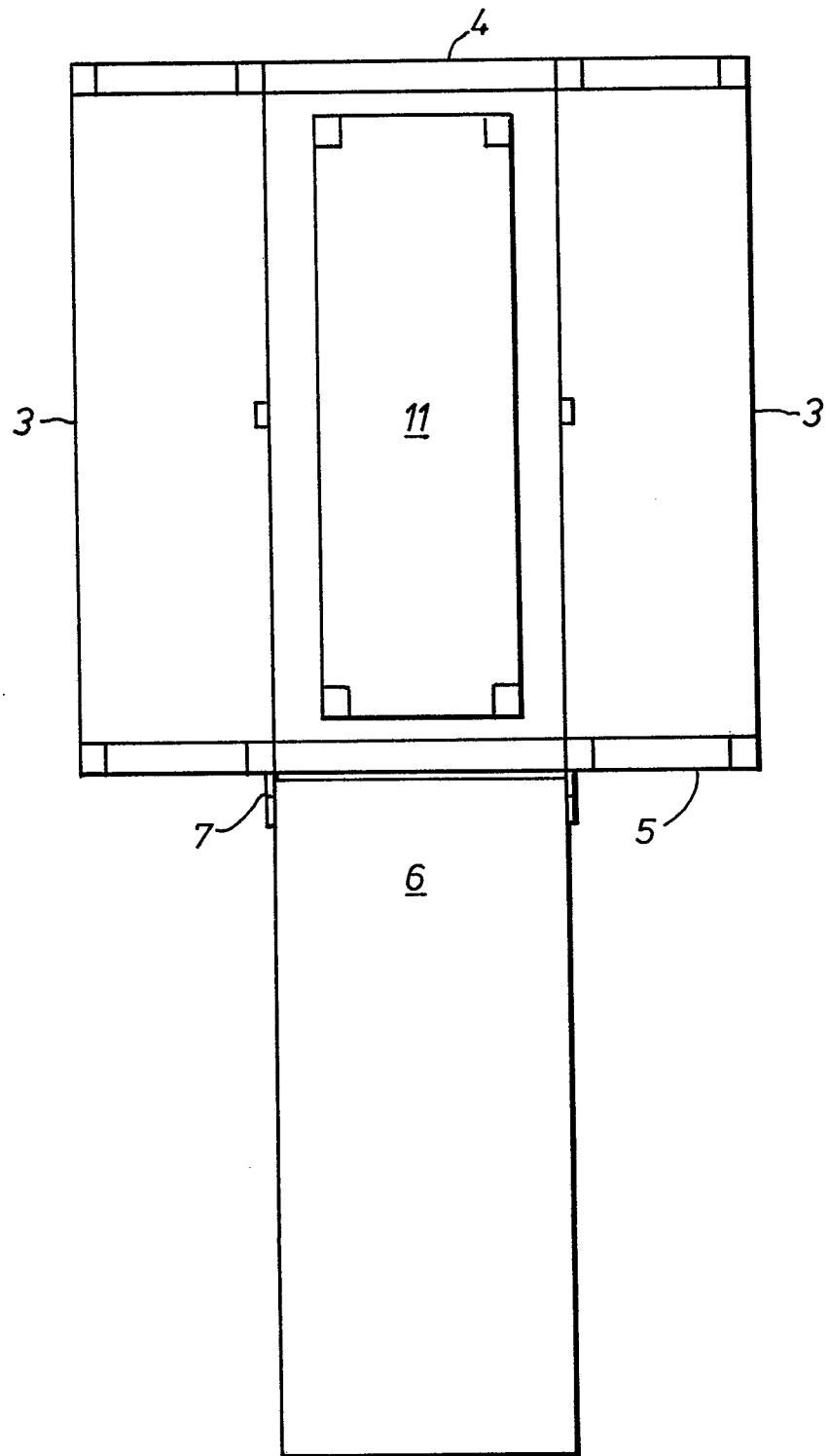
C L A I M S

1. A pallet box for storage consisting of a pallet base, four walls and a roof wherein the interior of the box is divided into at least three sections, each providing space for storage, and wherein at least 5 one of the sections is in the form of a movable section, characterised in that the movable section is capable of withdrawal from between two adjacent sections to a position in which access to all three sections is possible.
- 10 2. A pallet box according to claim 1 and having three sections, characterised in that the central section is in the form of a trolley which can be withdrawn from between the other two sections.
- 15 3. A pallet box according to claim 2 wherein the end wall of the trolley constitutes a section of one of the walls of the box.
- 20 4. A pallet box according to claim 2 wherein the centre section of one of the walls of the box is hinged at its base enabling it to be swung down to gain access to the trolley, the swung down section then acting as a base on to which the trolley may be rolled.
- 25 5. A pallet box according to any one of the preceding claims wherein each storage section is provided with shelves.

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Fig.1.



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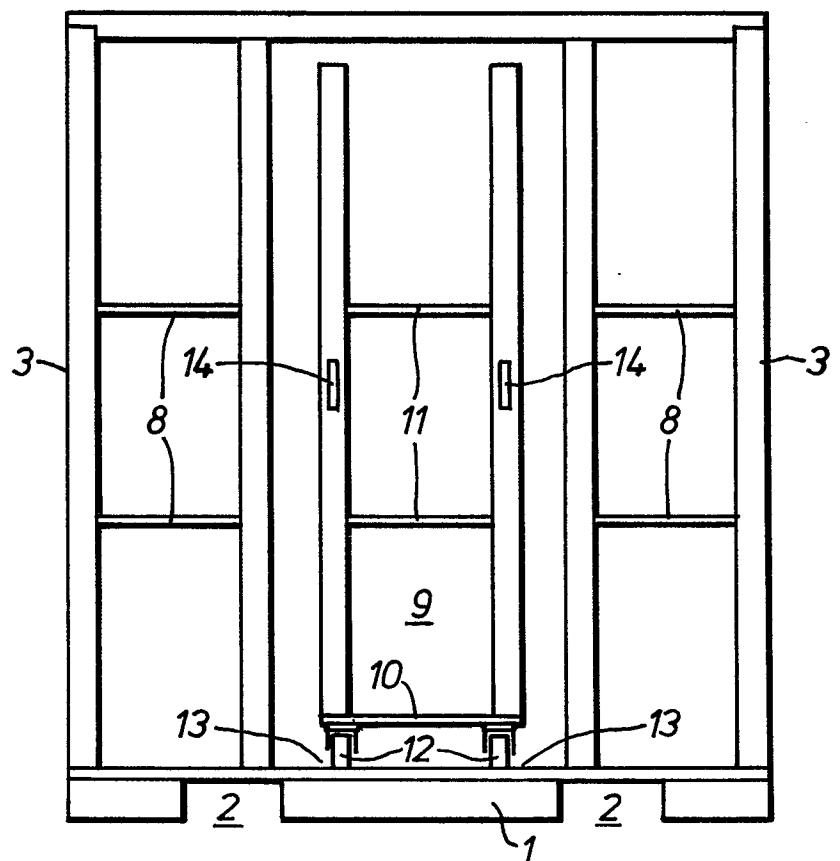


Fig. 2.

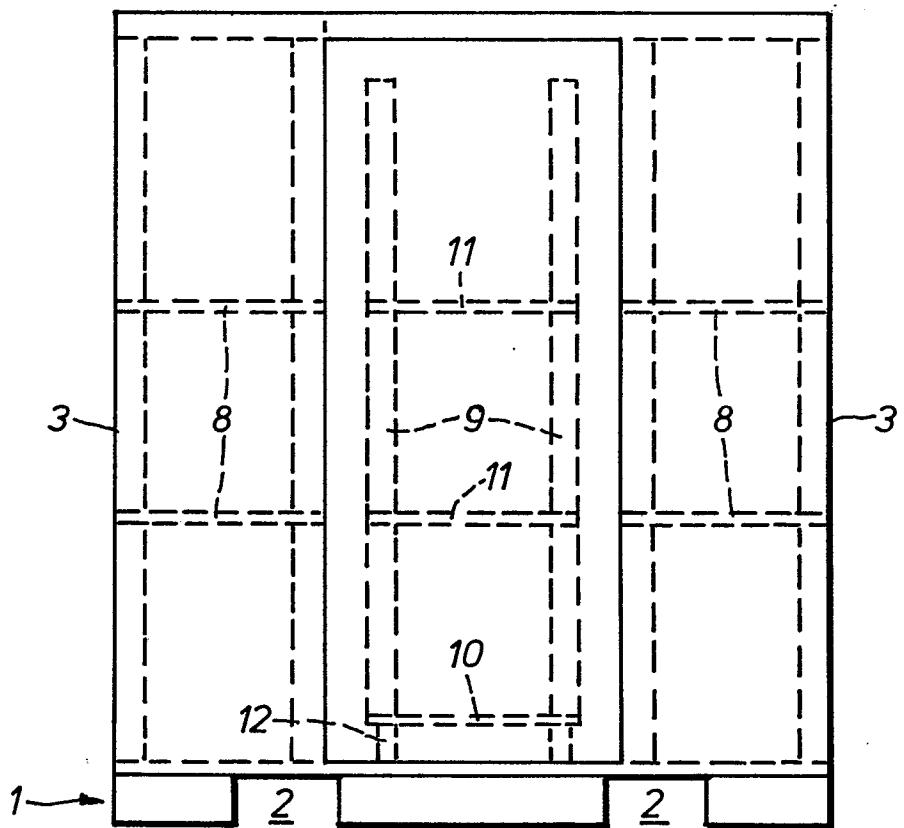
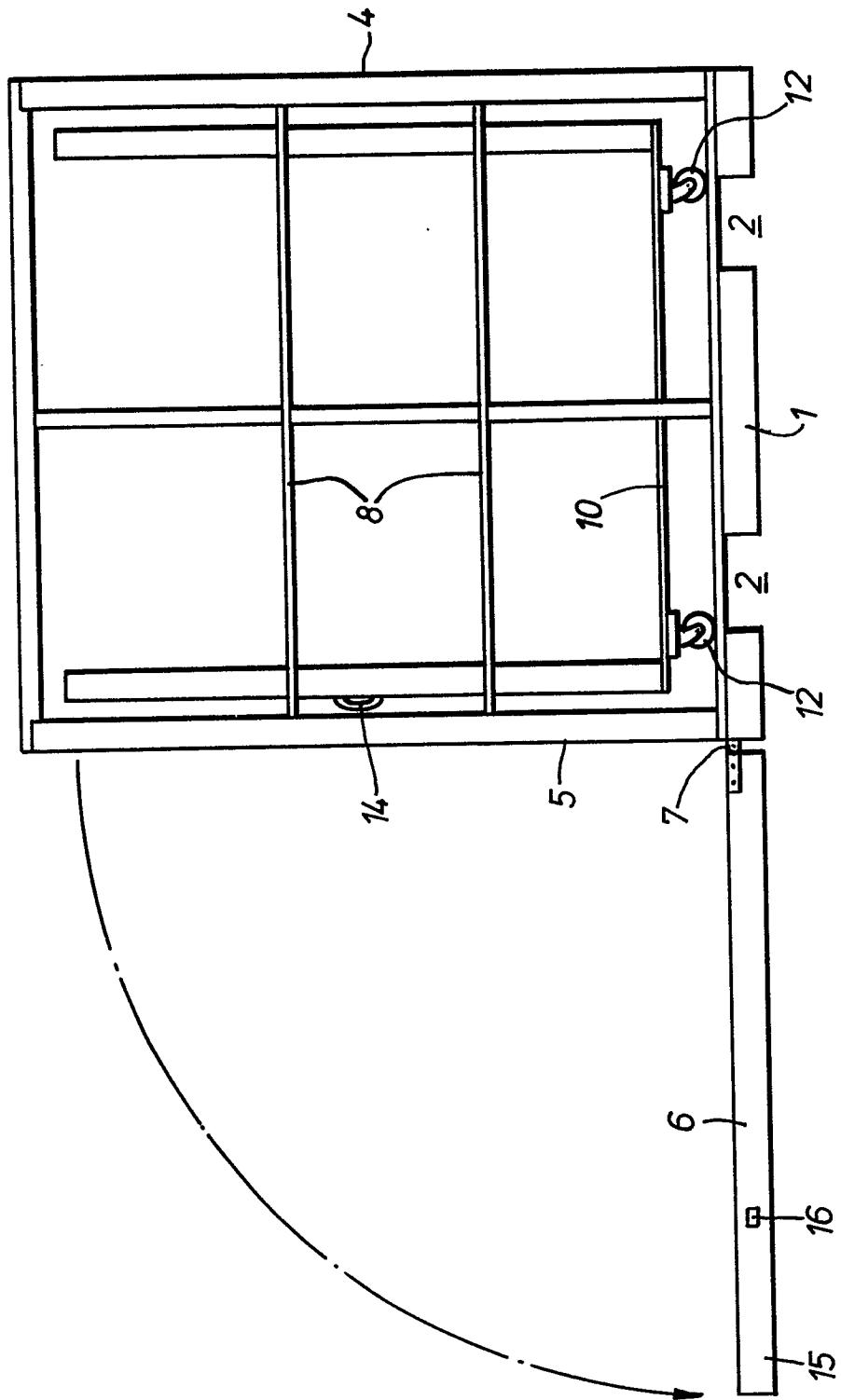


Fig. 5.

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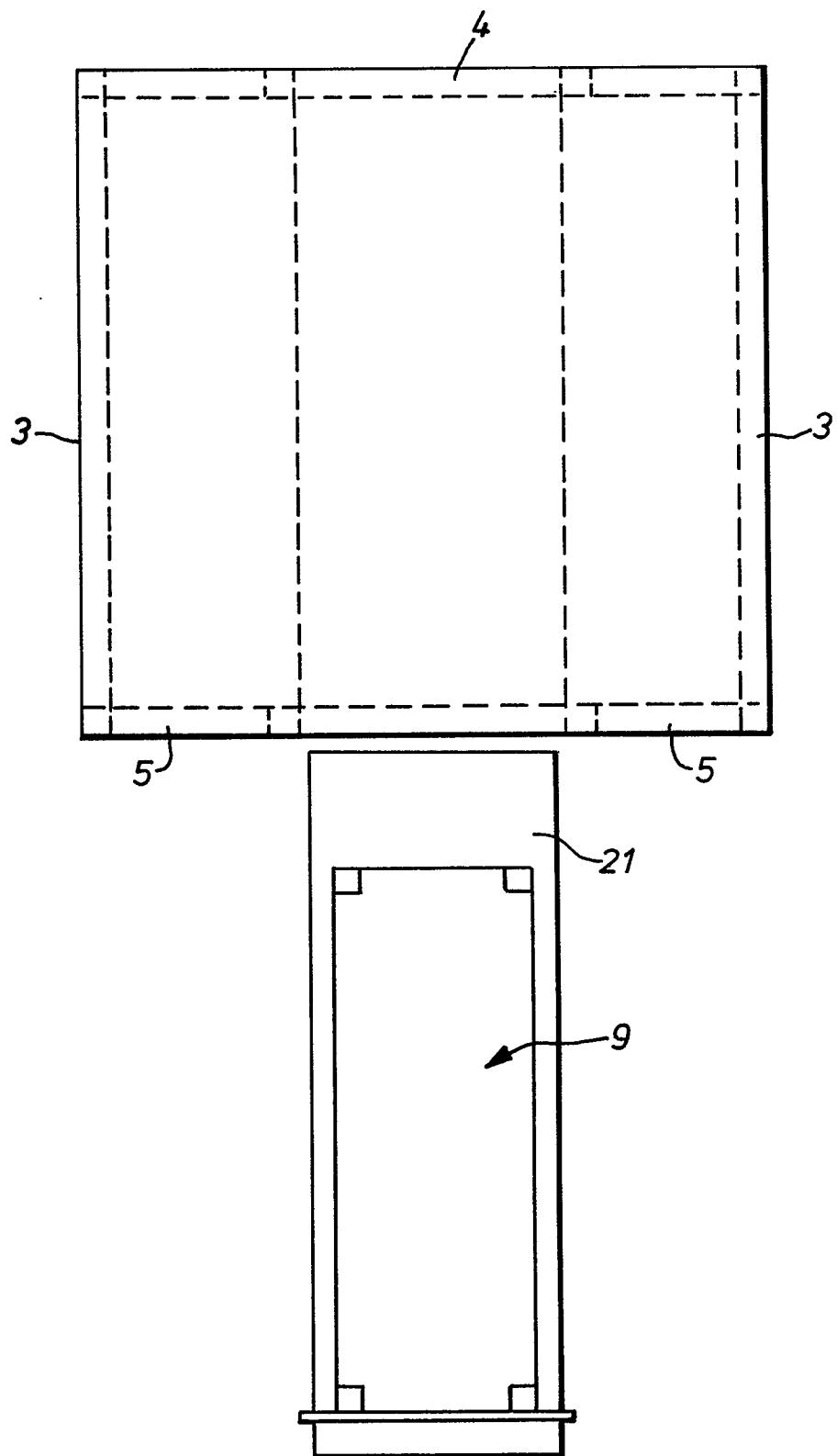
Fig. 3.



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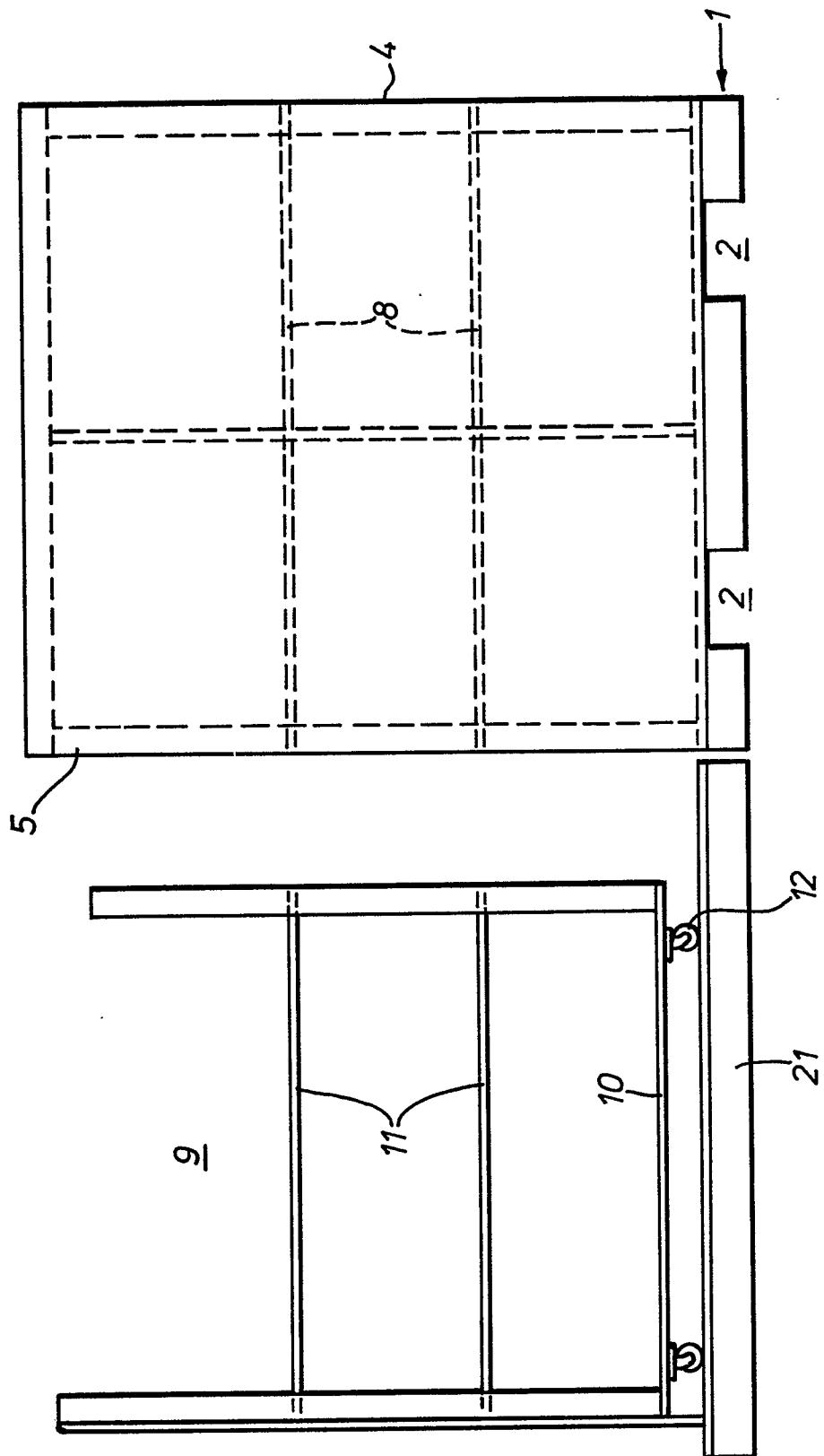
Fig.4.



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Fig. 6.





EUROPEAN SEARCH REPORT

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Application number

EP 83 30 0751

DOCUMENTS CONSIDERED TO BE RELEVANT		Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 3)
Category	Citation of document with indication, where appropriate, of relevant passages		
A	CH-A- 330 699 (GEIGER) * Figures 1d,2; page 2, lines 2-8, 73-83 *	1,2	B 65 D 88/12 B 65 D 19/02
A	--- GB-A- 401 743 (LEFEVRE-UTILE) * Figure 3; page 2, lines 14-39 *	1,5	
A	--- CH-A- 516 470 (KERNEN) * Figures 1,1a; column 3, lines 60-63; column 4, lines 1-3 *	1,4	
A	--- US-A-3 137 250 (HUTCHINSON) * Figure 8 *	3	
	-----		TECHNICAL FIELDS SEARCHED (Int. Cl. 3)
			B 65 D
The present search report has been drawn up for all claims			
Place of search THE HAGUE	Date of completion of the search 25-05-1983	Examiner STEEGMAN R.	
CATEGORY OF CITED DOCUMENTS		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	
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			