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(54) Container for holding and transporting crush barriers

(57) Container having a frame (1) that is executed in such a way that it provides proper protection for the loaded crush barriers during transport. The container is locked by a pivotable locking bar (4) mounted to the

frame (1). Due to the fact that the beams protrude above the frame, and get between the lower box girders (5) of the upper container on stacking, the containers can not slide from each other during transport.

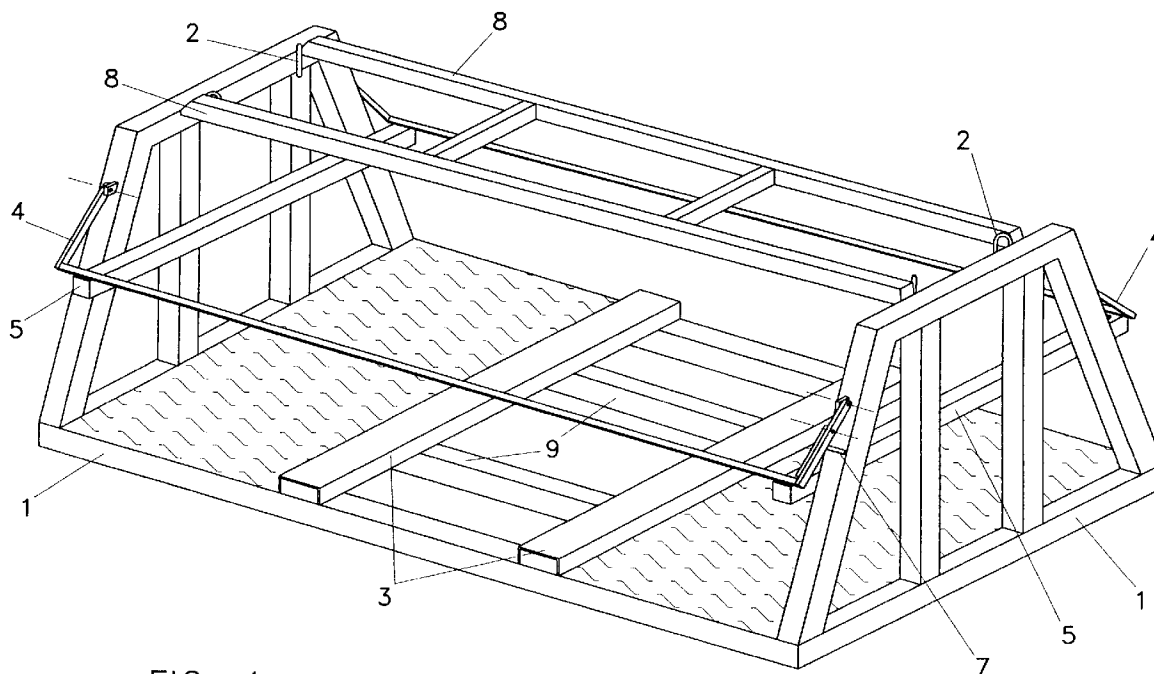


FIG. 1

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Description

The invention relates to a container for holding and transporting crush barriers, comprising a supporting frame having a supporting base.

Crush barriers are metal fences having standardized lengths and heights, with transverse supports at their lower sides thereof for being able to arrange the fences. Such crush barriers often have to form a closed cordon within a short time, for festive occasions, official openings, exhibitions, and the like. In order to be able to transport and load and unload the crush barriers quickly, one uses containers that can be transported by truck.

Existing containers for crush barriers have a number of disadvantages. They have a supporting frame which is too weak to protect the crush barriers sufficiently. Practice it has shown, that the crush barriers and the supporting frame too can easily get damaged during transport by truck, so that the damaged crush barriers can no longer be assembled properly and in case of a damaged supporting frame, the crush barriers can no longer be properly and easily arranged and locked in the container. A further disadvantage of the existing containers is the loose locking bar, by which the container filled with crush barriers is to be locked. At the ends of said locking bar, there is a pin, which is to be stuck into one of the holes intended for it. Practice has shown, that said locking bar is not always handled carefully; said locking bar is often bent, so that the container can no longer be safely locked, or the locking bar has even disappeared completely.

In order to be able to transport crush barriers by truck in an economically sound way, the containers should be stackable. With existing containers, there is the difficulty that the supporting frame is too low, so that on stacking two containers on top of each other, the upper container will bear on the crush barriers in the lower container, in which they could get damaged by the weight of the upper container. Furthermore, if the containers are not properly secured by belts during transport, there is a risk that they are going to slide and can fall from the trailer truck, as a result of which a dangerous situation in traffic may occur.

The object of the invention is to provide a container, in which said difficulties have been removed, and in which the supporting frame is constructed in such a way, that it provides proper protection for the crush barriers, and in which the containers can be stacked excellently.

To that end, the invention provides for a container for holding and transporting crush barriers, comprising

a supporting frame having a supporting base, the length of which being greater than that of a standard crush barrier, and the width of which being sufficient for arranging a number of crush barriers in succession, said supporting frame having a rectangular base

border with two longitudinally opposite raised side borders having their upper edges connected by two longitudinally extending, parallel upper beams with their top planes being higher than the upper edges of the side borders,

in which the base border has two parallel, longitudinally situated supporting beams for carrying a baseplate, said supporting beams being slid outwardly in relation to the upper beams,

in which the side borders each have raised fence struts and a box girder arranged transversely thereto, situated beneath the height of a crush barrier and extending across the full width of the container, and in which each of the open front and back sides of the supporting frame has been provided with a pivotable locking bar being pivotably connected to respective side edges of the side borders.

This construction enables easy transport and loading and unloading of large numbers of crush barriers, in which the risk of the crush barriers or the containers getting damaged is extremely small. Due to the construction of the invention, it is possible to work with crush barriers that are lighter in weight, which has the advantage that one can transport more metres of crush barrier per container.

The two parallel upper beams of the supporting frame represent an efficient means for stacking. When positioning an upper container onto a lower container, the upper beams of the lower container, which are situated slightly upwards, slide between the two supporting beams of the base border of the upper container, as a result of which lateral sliding has been rendered impossible. The transverse box girders of the side borders, situated beneath the height of a supporting fence, represent an efficient means for preventing the crush barriers stacked according to the longitudinal direction of a container from sliding into the fences. Through this, it is guaranteed, that the fences will not be able to slide into the side borders during transport. The pivotable locking bars, pivotably connected to the respective side edges of the side borders, represent a reliable and easily operable locking means for locking the open front and back sides of the supporting frame, after the crush barriers have been loaded.

Further, the base border can efficiently have two parallel transverse box girders across the width of said border, said transverse box girders efficiently representing engaging box girders for picking up the container with a forklift truck. Preferably, there is no baseplate between the transverse box girders, which saves weight.

According to a preferred embodiment of the invention, the side borders are trapezium-shaped with two side edges extending inwardly. This has the advantage, that one can easily remove the crush barriers from both open sides of the container, without having to put one's arms through the frame. Preferably, the embodiment is such, that the transversely situated box girders of the

side borders project beyond the oblique side edges, and form points of support for the pivotable locking bars in a lowermost, closed position. In this way, a reliable locking by the locking bars is guaranteed. Furthermore, the invention provides for, that the pivotable locking bars can be locked in their uppermost open position, in which the crush barriers beneath them can be slid outwards and inwards. This can easily take place by means of a ratchet system.

In view of an easy transportability, further, the upper edges of the side borders can be provided with crane lugs, by which the containers can be hoisted in order to be positioned on top of each other.

The invention is further explained by way of the drawing of a preferred embodiment, in which:

Fig. 1 shows a perspective view of a container according to the invention, in which the locking bar is in the closed position;

Fig. 2 shows a perspective view of said container with the locking bar in the opened position; and

Fig. 3 shows a cross-section of two containers in a stacked position.

The crush barriers were omitted from the figures because the dimensions of the crush barriers are known.

The illustrated container in Fig. 1 consists of a supporting frame 1 being higher than the crush barriers to be placed in it. The container can be hoisted at the crane lugs 2 and, by sliding the forks of a forklift truck into the engaging box girders 3, be driven across the track. The container is executed in such a way that the angles of the supporting frame 1 have been positioned obliquely inwards in transverse direction, for the purpose of taking out the crush barriers from the side, without having to put one's arms through the frame. A pivotable locking bar 4 is mounted at both sides of the supporting frame 1, in which said bar will bear on the box girders 5 in the locked position. The box girders 5 extend across the full depth of the container for the purpose of preventing the crush barriers from being stuck through the frame during loading thereof.

Fig. 2 illustrates the locking bar 4 in the opened position. The locking bar 4 can be simply opened by one person, in that a pivotable blocking strip 6 is mounted at one side of the locking bar 4, in which for said opened position, said strip can be put behind a small pipe 7 welded to said frame.

From the centre, the container is loaded with crush barriers at both sides, so that it will be full in a short time. The loaded containers are stacked as illustrated in cross-section in Fig. 3. The supporting frame 1 of the upper container B will bear on the supporting frame 1 of the lower container A. The upper beams 8 are arranged 3 cm higher than the frame 1, so that on stacking, the upper beams 8 of container A will get between the supporting beams 9 of container B and the containers will not be able to slide from each other during transport.

Due to the fact that the container has been executed solidly, it is possible to stack the containers up to 5 specimens when storing them, so that a considerable amount of space can be saved.

In the above, the invention has been explained by way of a preferred embodiment. However, it will be apparent, that many variations are possible, and that many modifications can be made without going beyond the scope of the invention, as it is defined in the claims.

Claims

1. Container for holding and transporting crush barriers, comprising

a supporting frame having a supporting base, the length of which being greater than that of a standard crush barrier, and the width of which being sufficient for arranging a number of crush barriers in succession, said supporting frame having a rectangular base border with two longitudinally opposite raised side borders having their upper edges connected by two longitudinally extending, parallel upper beams with their top planes being higher than the upper edges of the side borders, in which the base border has two parallel, longitudinally situated supporting beams for carrying a baseplate, said supporting beams being slid outwardly in relation to the upper beams, in which the side borders each have raised fence struts and a box girder arranged transversely thereto, situated beneath the height of a crush barrier and extending across the full width of the container, and in which each of the open front and back sides of the supporting frame has been provided with a pivotable locking bar being pivotably connected to the respective side edges of the side borders.

2. Container according to claim 2, characterized in that the lower border has two parallel transverse box girders across the width of the border.
3. Container according to claim 2, characterized in that no baseplate has been laid between the transverse box girders.
4. Container according to one of the claims 1 - 3, characterized in that the side borders are trapezium-shaped with two side edges extending obliquely inwards.
5. Container according to claim 4, characterized in that the transversely situated box girders of the side

borders project beyond the oblique side edges, and form points of support for the pivotable locking bars in a lowermost, closed position.

6. Container according to one of the preceding claims, characterized in that the pivotable locking bars can be locked in their uppermost, open position. 5
7. Container according to one of the preceding claims, characterized in that the upper edges of the side borders are provided with crane lugs. 10

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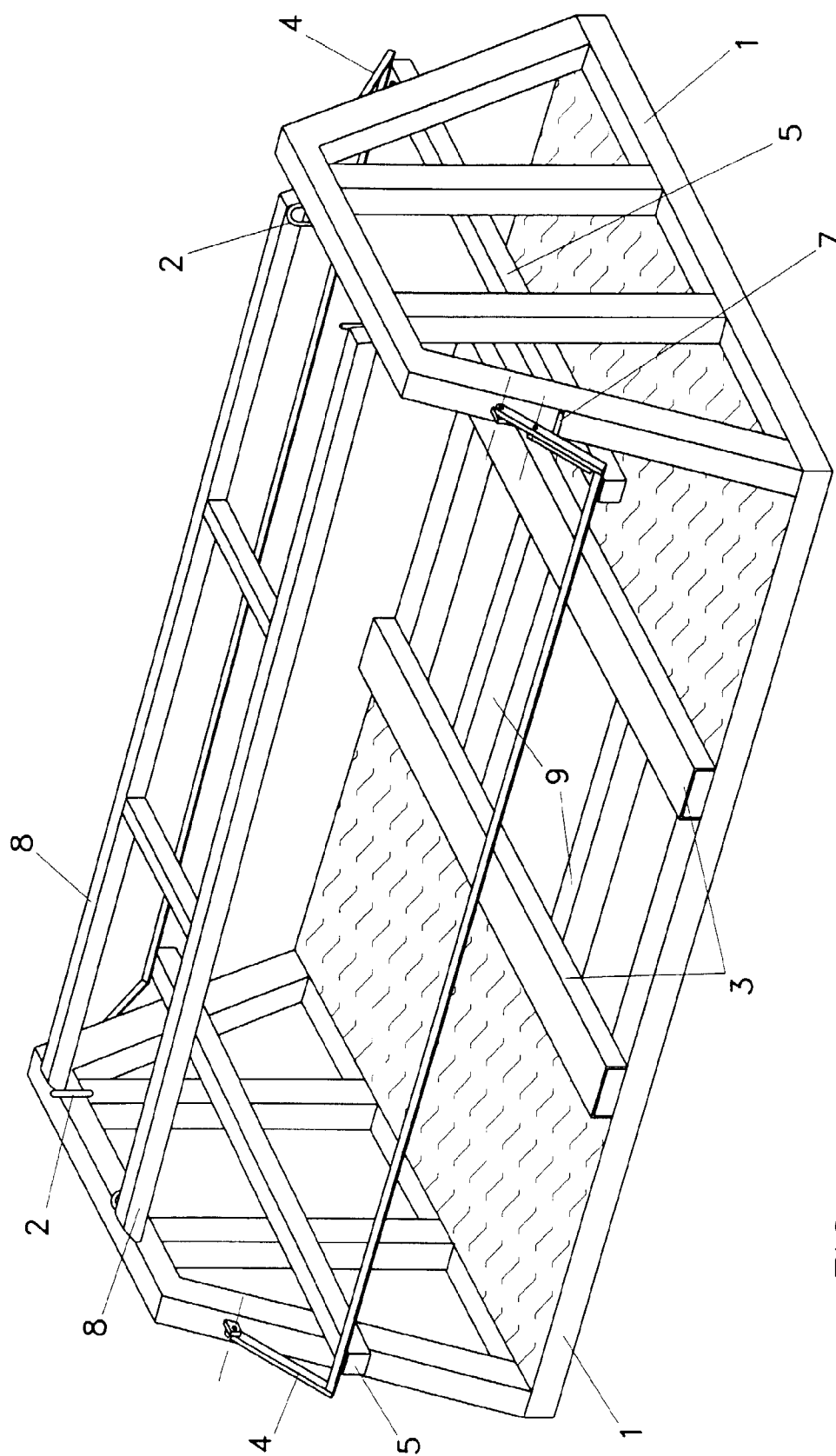


FIG. 1

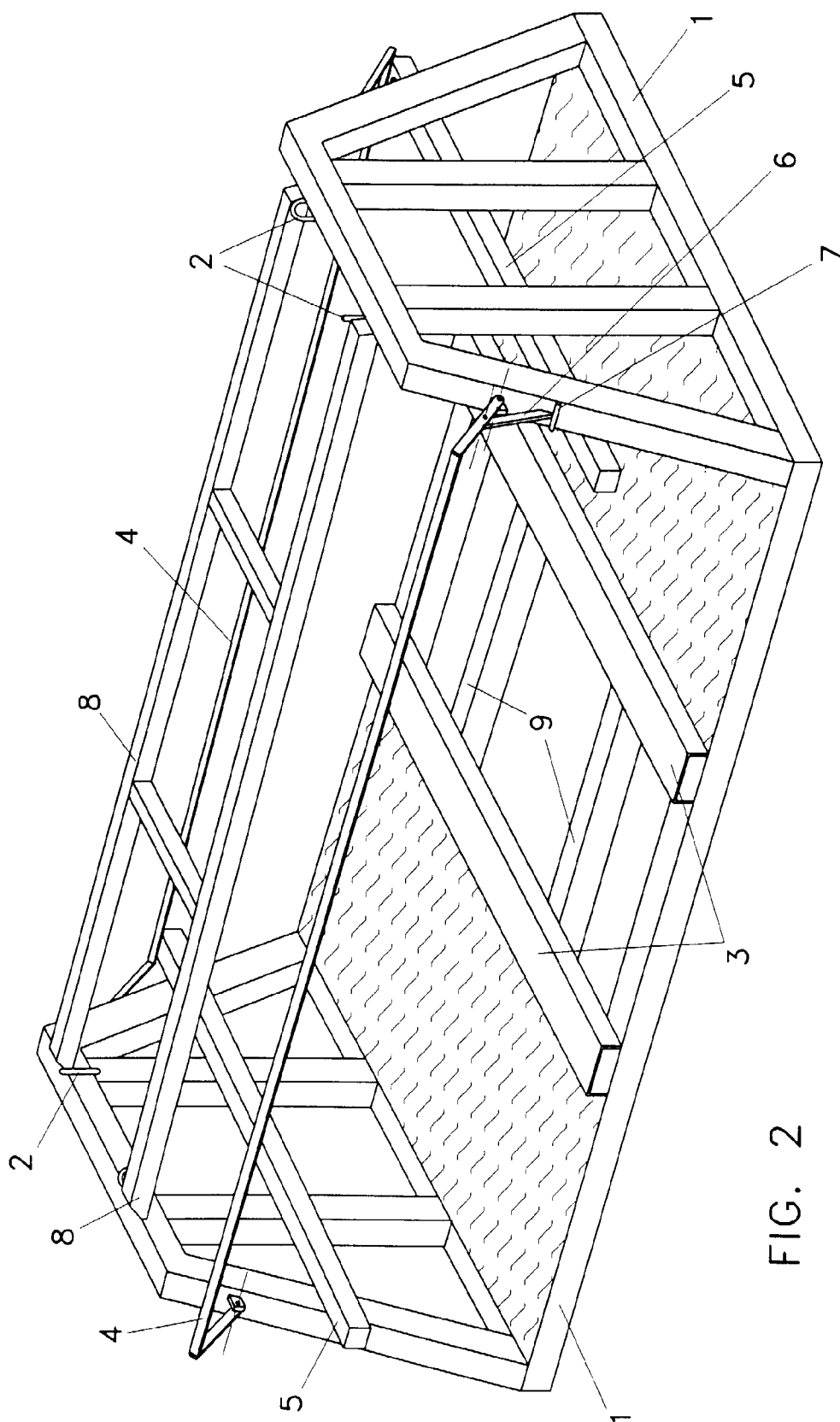


FIG. 2

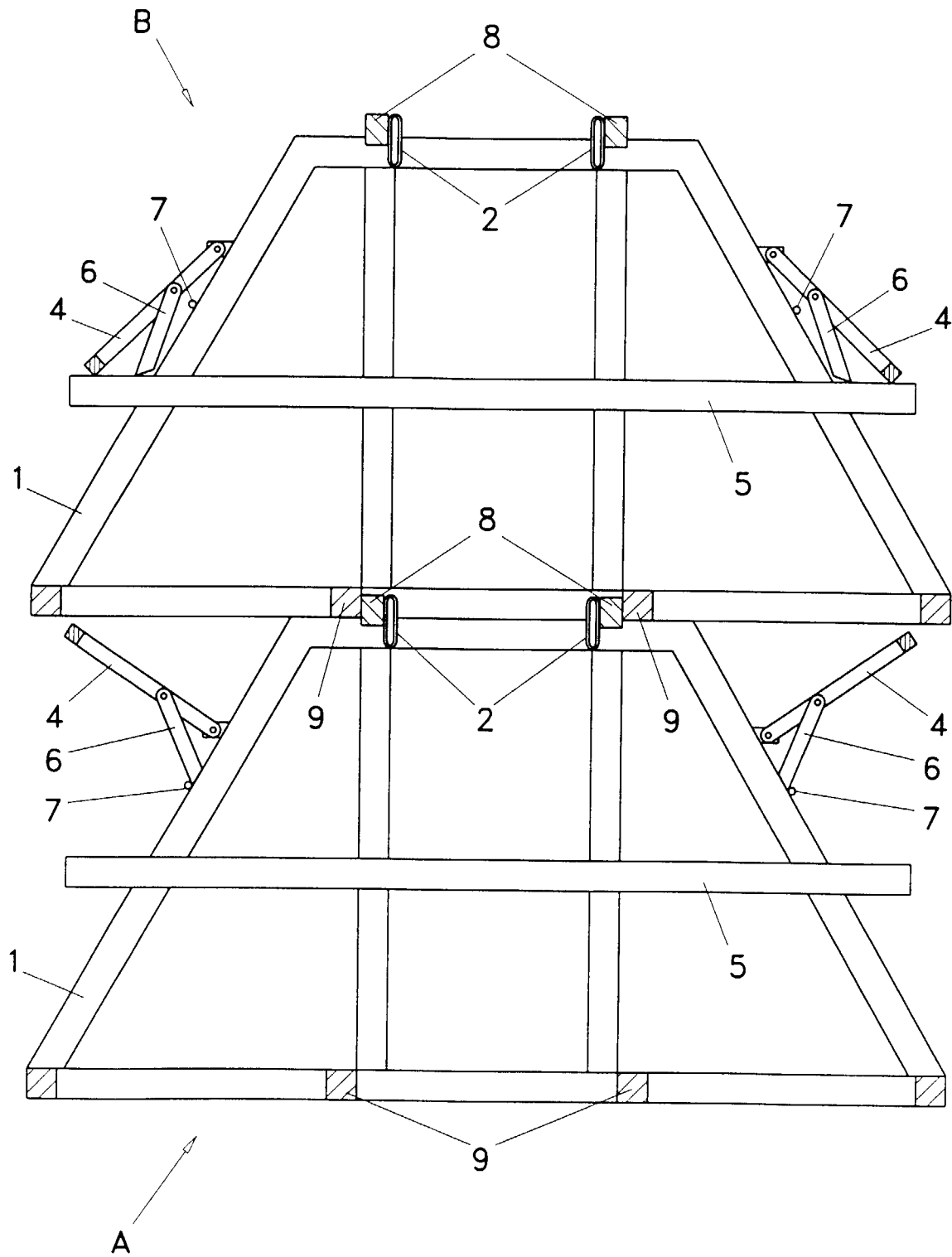


FIG. 3



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EUROPEAN SEARCH REPORT

Application Number
EP 98 20 0347

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.6)
A	CH 507 825 A (S.C.R.I.T.) 31 May 1971 * page 1, column 2, line 20 - line 25 *	1	B65D88/12
A	FR 2 734 290 A (REALISATION D INVENTIONS TECH) 22 November 1996 * abstract *	1	
A	FR 2 730 199 A (MOST) 9 August 1996		
A	DE 19 03 855 A (S.C.R.I.T.) 20 August 1970		
A	EP 0 012 705 A (CERRI JACQUES) 25 June 1980		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6) E04H E01F B65D
Place of search THE HAGUE		Date of completion of the search 22 May 1998	Examiner Beernaert, J
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