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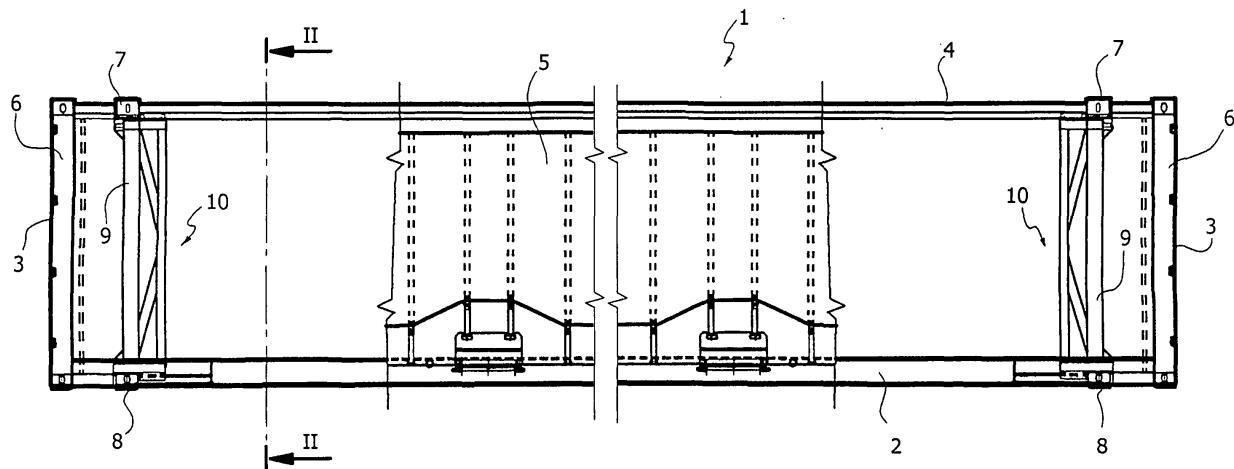
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(54) Curtaininside container

(57) Described herein is a curtaininside container in which set between the side curtain walls (5) and the corner uprights (6) are mobile structures (10) carrying the vertical resistant elements (9) associated to the top and bottom hoisting/stacking blocks or corner fittings (7, 8).

The mobile structures (10) are able to slide in a direction parallel to the side curtain walls (5) between a closed position and an open position, in which they do not obstruct loading and unloading of the container in the areas of the end walls (3).

FIG. 1



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Description

[0001] The present invention relates in general to containers for the transportation of goods, and more in particular relates to a curtainside container comprising a bottom, a roof, two end walls and two side curtain walls. Corner uprights are arranged between the end walls and the side walls for support of the roof by the bottom, and top and bottom hoisting/stacking blocks or fittings are set in a position corresponding to the side curtain walls at a distance from the corner uprights. Said hoisting/stacking fittings are interconnected by vertical resistant elements.

[0002] European standards envisage for containers a maximum length of 13.72 m and a maximum width of 2.55 m, which enables introduction of two rows of standard Euro-pallets within the container. The hoisting/stacking fittings with the corresponding vertical resistant elements of interconnection are set at a distance of 12.19 m (40 feet) from one another, which enables positioning of another container of equal length (13.72 m) or else of smaller length (12.19 m) on top of the first container. Curtainside containers present the advantage of enabling loading and unloading of the goods through the side walls instead of through the end walls, as in the case of containers with rigid side walls. However, the presence of the vertical resistant elements that interconnect the hoisting/stacking fittings at a distance from the ends of the container constitutes an obstacle to loading and unloading of the container in the areas of the end walls.

[0003] To overcome this drawback the document EP-B-1204573 envisages a solution in which the vertical resistant elements form part of mobile structures set between the aforesaid hoisting/stacking fittings and the adjacent corner uprights. In particular, said mobile structures are hinged to the corner uprights so as to be able to rotate between a retracted closed position, in which they perform the function of resistance to the hoisting/stacking loads, and an extracted open position for enabling loading and unloading at the ends of the container.

[0004] This arrangement entails problems of encumbrance, given that the angular movements between the closed position and the open position of the hinged mobile structures calls for space at the sides and also in front of the end walls of the container.

[0005] The object of the present invention is to overcome the aforesaid drawback, and said purpose is achieved thanks to the fact that, in a curtainside container of the type defined at the beginning of the present description, the aforesaid mobile structures are able to slide in a direction parallel to the side curtain walls between the aforesaid closed and open positions.

[0006] Thanks to this idea of solution, opening and closing of the mobile structures are performed in the plane of the corresponding side curtain wall of the container, eliminating any problem of encumbrance at the sides and in front of it. According to a preferred embodiment of the invention, the aforesaid mobile structures are provided at the top and at the bottom with carriages

guided along horizontal rails carried by the bottom and by the roof of the container.

[0007] The mobile structures are moreover conveniently provided with horizontal pins for centring and clamping, which can be engaged within corresponding detents associated to the top and bottom hoisting/stacking fittings.

[0008] The invention will now be described in detail with reference to the annexed plate of drawings, which are provided purely by way of non-limiting example and in which:

Figure 1 is a schematic and partially broken side elevation view of a curtainside container according to the invention;

Figure 2 is a partial vertical cross-sectional view at an enlarged scale according to the line II-II of Figure 1; and

Figure 3 is a side elevation according to the arrow III of Figure 2.

[0009] With reference to the drawings, number 1 designates as a whole a curtainside container according to the invention, including a bottom wall 2, two end walls 3, a top wall or roof 4 and two side curtain walls 5, which can be slid open. The roof 4 is supported by the bottom 2 by means of two pairs of corner uprights 6, set between the end walls 3 and the side curtain walls 5, and by further mobile intermediate uprights.

[0010] Designated by 7, 8 are hoisting/stacking blocks ("corner fittings"), respectively top and bottom ones, normally separated from one another at a distance of 12.2 m (40 feet) apart. Since the normalized maximum total length of the container 1 is 13.6 m, the hoisting/stacking corner fittings 7, 8 are in general set at a distance from the corner uprights 6, set adjacent thereto, of about 0.7 m.

[0011] The top corner fittings 7 are vertically aligned with the respective bottom corner fittings 8, and set between them are respective vertical resistant elements 9.

[0012] The vertical resistant elements 9 have the function of ensuring the necessary structural resistance in the case of hoisting, as well as stacking, of another container on top of the container 1.

[0013] According to the invention, each vertical resistant element 9 forms part of a respective mobile structure 10, which is set between the corresponding side curtain wall 5 and the corresponding corner upright 6 and can be displaced between an advanced closed position, which is represented in the drawings and in which it completes the side wall 5, and a retracted open position for enabling convenient access in a position adjacent to the corresponding end wall 3 for the manoeuvres of loading and unloading of the container 1.

[0014] Displacement of each mobile structure 10 between the aforesaid closed and open positions is by sliding, in a direction parallel to the side curtain walls 5. As is illustrated in greater detail in Figures 2 and 3, sliding occurs via top carriages 11 and 12, which are carried by

each mobile structure 10 and are mobile within top and bottom guide rails 13, 14 carried, respectively, by the roof 4 and by the bottom 2 of the container 1. In addition, as may be seen more clearly in Figure 4, each mobile structure 10 is provided at the top and at the bottom with horizontal pins for centring and detent 15, 16 which can be engaged, in the closed position, within corresponding top and bottom detents 17, 18 carried by the corner fittings 7 and 8. The detents 17, 18 will be conveniently equipped with disengageable clamping members (not illustrated in so far as they are within the reach of a person skilled in the branch) for arresting the pins 15, 16 when they are engaged within said detents 17, 18.

[0015] Of course, the details of construction and the embodiments may vary widely with respect to what is described and illustrated herein, without thereby departing from the scope of the present invention, as defined in the ensuing claims.

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Claims

1. A container comprising a bottom (2), a roof (4), two end walls (3), two side curtain walls (5), corner uprights (6), set between the end walls (3) and the side walls (5), and top and bottom hoisting/stacking corner fittings (7, 8), arranged in a position corresponding to said side walls (5) at a distance from said corner uprights (6) and interconnected by vertical resistant elements (9), in which said vertical resistant elements form part of mobile structures (10) provided between said hoisting/stacking corner fittings (7, 8) and the adjacent corner uprights (6), which can be displaced between a closed position and an open position, in which they do not obstruct loading and unloading of the container through said side curtain walls (5), said container being **characterized in that** said mobile structures (10) are able to slide in a direction parallel to said side curtain walls (5) between said closed and open positions.
2. The container according to Claim 1, **characterized in that** mobile structures (10) are provided at the top and at the bottom with carriages (11, 12) guided along horizontal rails (13, 14) carried by the roof (4) and by the bottom (2) of the container (1).
3. The container according to Claim 1 or Claim 2, **characterized in that** said mobile structures (10) are provided with horizontal centring and clamping pins (15, 16), which can be engaged within corresponding detents (17, 18) associated to the top and bottom hoisting/stacking corner fittings (7, 8).

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FIG. 1

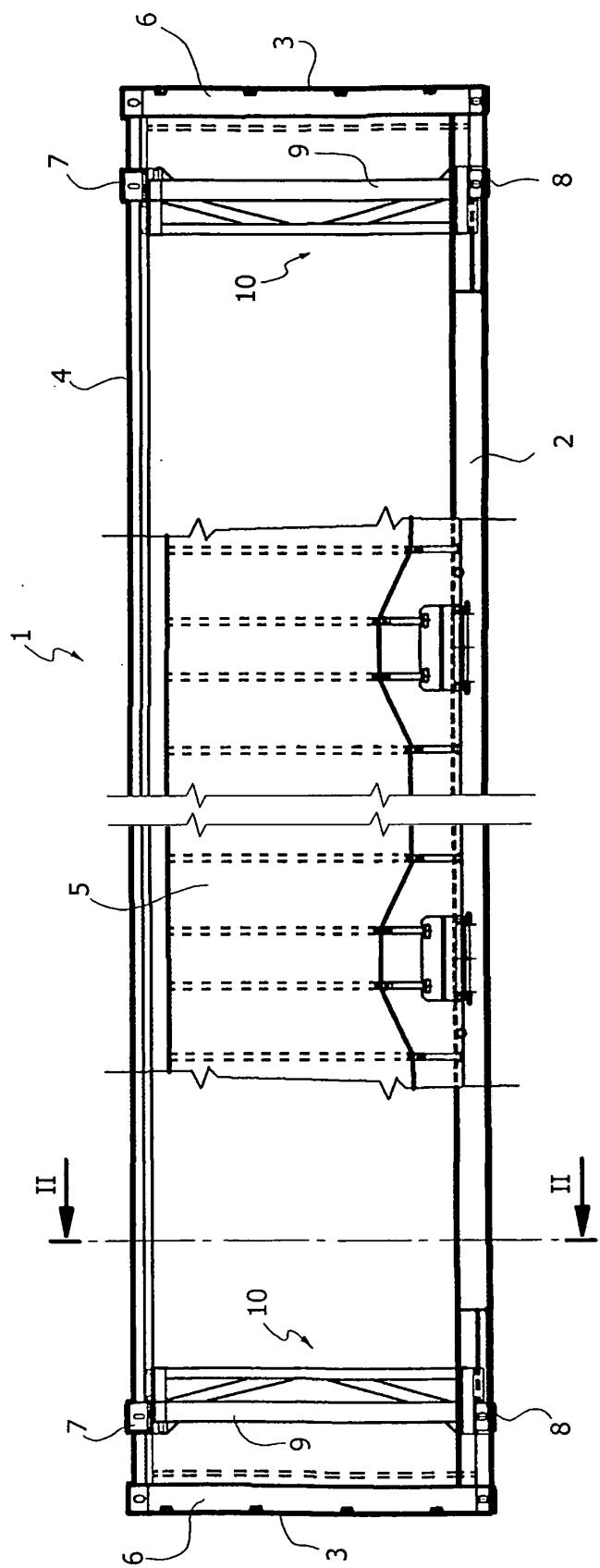


FIG. 2

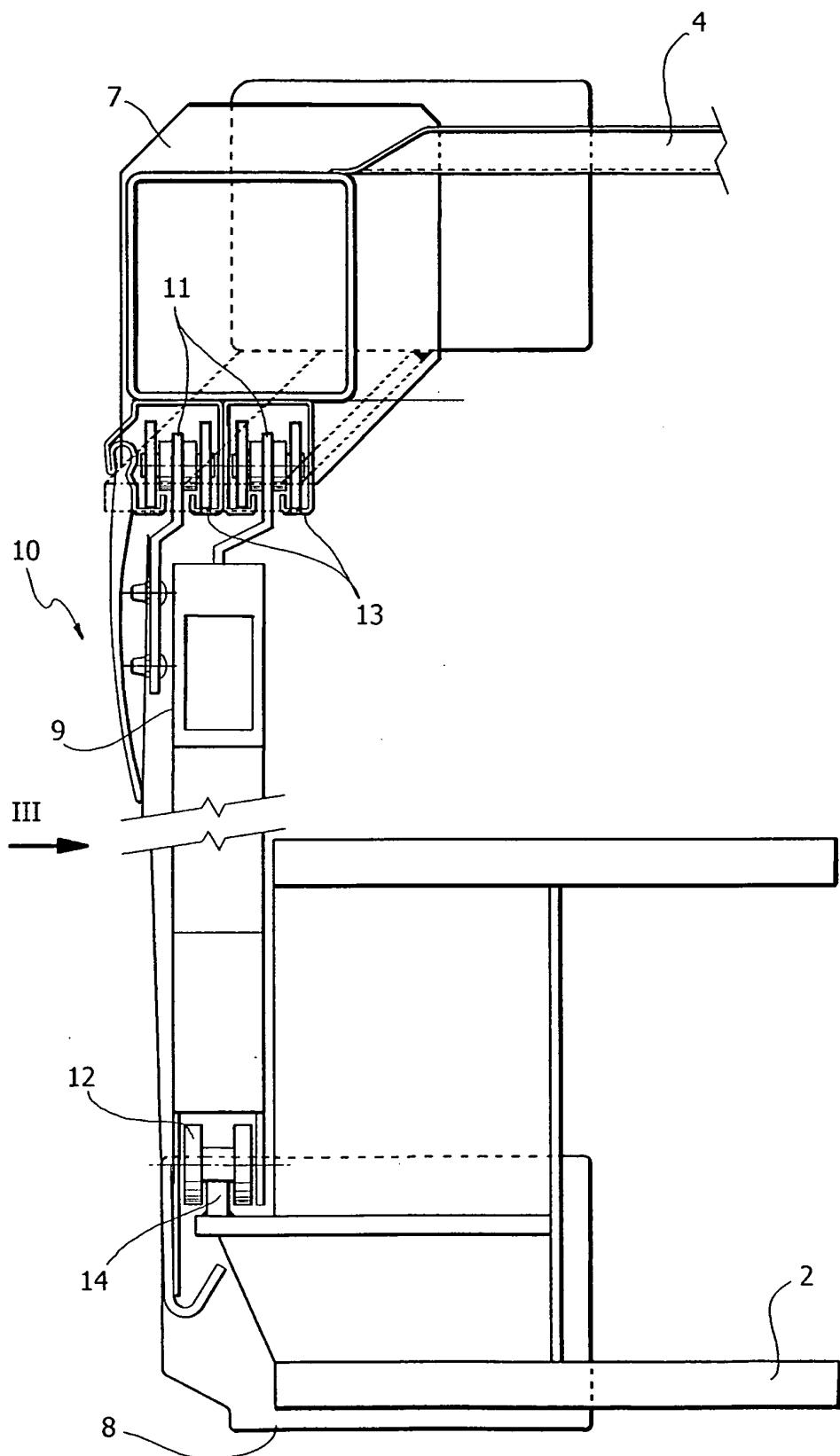
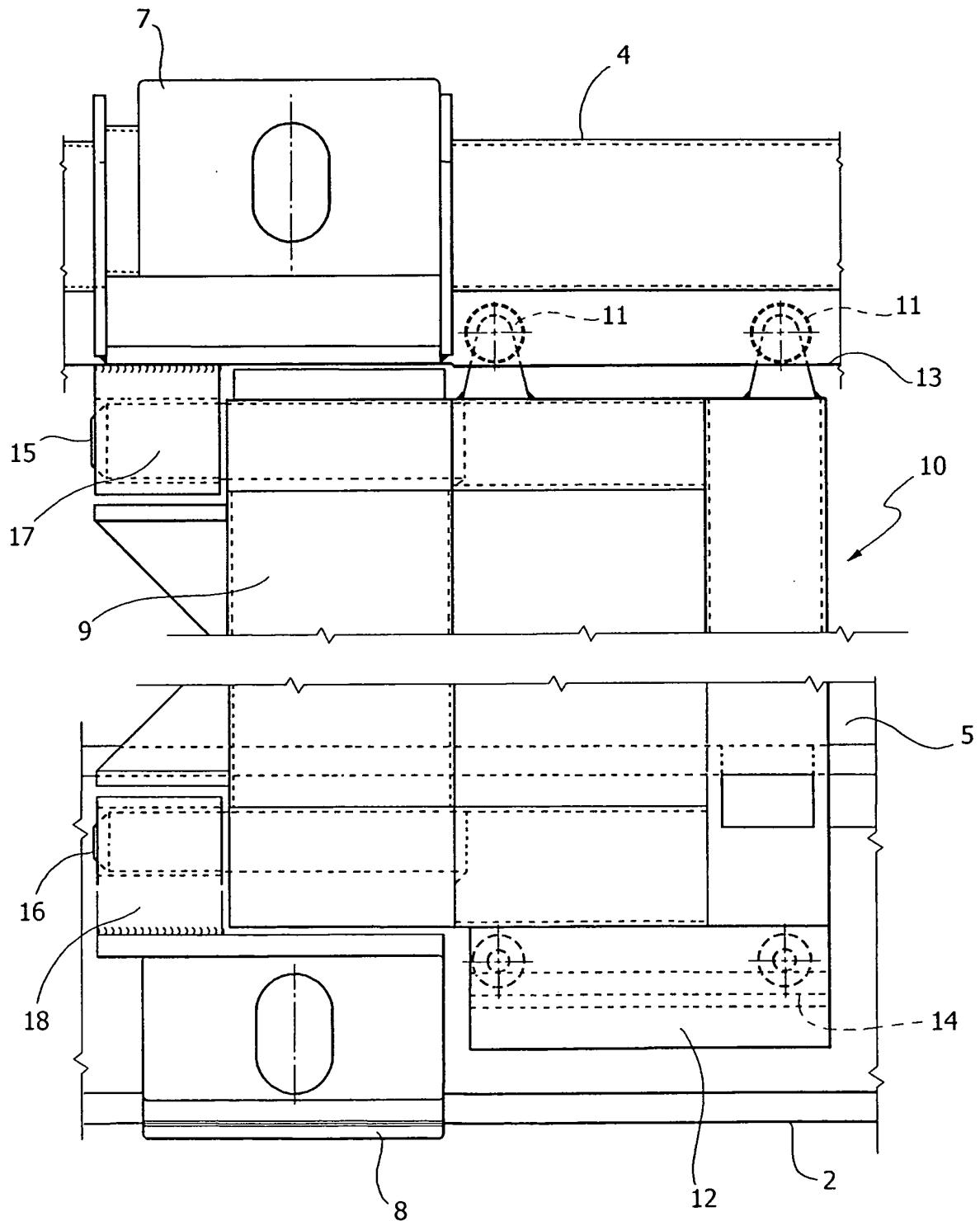


FIG. 3





DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
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3			TECHNICAL FIELDS SEARCHED (IPC)
The present search report has been drawn up for all claims			B65D
Place of search		Date of completion of the search	Examiner
The Hague		15 December 2005	Zanghi, A
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			

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

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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.

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