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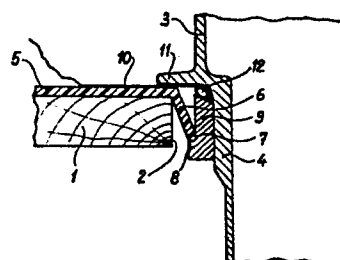
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**NL-2502 LS Den Haag(NL)**(54) **Container for liquids or particulate bulk material.**

(57) The invention relates to a container of rigid material and provided with an inner bag (10) which container at its bottom (15) has drain means (2) in the form of a valve housing (3) which extends through an opening of the bag, the bottom and a pallet supporting the container said bottom opening having along its inner circumference radial incisions forming tongues (6) bent downwardly and resting upon a ring (9), the bag (10) being passed between said bottom (5) and a flange (11) of the valve housing and along the neck (4) of the valve housing (3) and clamped against said neck (4) by a sealing ring (12).

**EP 0 099 612 A1**

Container for liquids or particulate bulk material.

The invention is related to a container for liquids or particulate bulk material comprising a container of cardboard, fibers or such rigid material that with its bottom is supported by a pallet, in which container an inner bag is present out of plastic material, which container at the place of its bottom is provided with  
5 drain means comprising a valve housing with valve operating means, which housing extends with a neck through openings in the bag, oriented in one line with each other, the bottom and the pallet, which passage is sealed by clamping the edges of the openings of the bag,  
10 the bottom and the pallet together with one or more sealing rings between a flange or edge of the housing present within the bag and a clamping ring positioned on the housing below the pallet.

Such a container is known from Dutch laid open patent application 7008018. In this known container the neck of the valve  
15 housing fits in the openings of the bag, the bottom and the pallet, which openings all have the same diameter. Between the edge of the opening of the bag and the edge of the bottom opening a sealing ring of hte O-ring type is clamped.

The sealing of this known container in a number of  
20 circumstances presents difficulties. By rough handling or falling over of the container the problem arises that by displacement of the contents, in particular when this is liquid, the container deforms and high tensions develop in the inner bag at the place where this is fixed near the drain means. This may result in tearing  
25 of the inner bag by which serious leakage occurs.

The aim of the invention is to provide a construction in which this objection no longer arises without being obliged to make use of obvious but more expensive solutions, such as the application of a stronger inner bag and a stronger clamping of  
30 stronger sealing rings.

This aim according to the invention is obtained by the fact that the edge of the opening of the bottom along the whole inner circumference is provided with radial incisions for

forming tongues of which the base is present on the diameter that nearly is the same as that of the hole in the pallet and greater than the outer diameter of the neck of the valve housing, which tongues are bent downwardly and with their ends support on an edge  
5 or shoulder or a ring fixed on the neck, and the edge of the opening of the bag is passed between the bottom and the flange and extends to the neck around a seal clamped between a ring and a valve housing, which seal also encloses the edge of the bag extending downwardly along the neck. The tongues formed in the edge of the  
10 opening of the bottom now form so to speak a cone-shaped support edge, that cares that under all circumstances relative movements between the valve housing and the bottom cannot take place. Under extreme heavy support conditions and falling over of the container, however, the valve housing can move upwardly with regard to the  
15 pallet and follow so to say the moving inner bag, by which high tear forces and tearing of the inner bag are avoided. Indeed the bottom may come loose of the pallet, but the clamping of the bag between the sealing ring and the valve housing remains.

Now the invention will be elucidated with the  
20 aid of the drawing.

This shows schematically in section the principle of the invention. The drawing shows a pallet 1 with an opening 2. Herein a valve housing 3 extends of which the construction essentially may be the same as that shown in patent application 7008018,  
25 which valve housing has a neck 4.

The bottom 5 existing of corrugated cardboard has an opening of which the edge is formed by tongues 6 that in a known matter can be obtained by means of radial incisions. These tongues 6 support with their lower ends 7 on a shoulder 8 of a  
30 clamping ring 9 mounted on the neck 4. The inner bag 10 rests on the bottom 5 and is at the place of the flange 11 enclosed between the bottom 5 and this flange.

The bag extends to the neck 4 and subsequently downwardly along the neck 4 until the clamping ring 9 and thereby  
35 encircles a sealing ring 12 that encloses the neck and the inner bag and that is clamped between the lower side of the flange 11 and the clamping ring 9.

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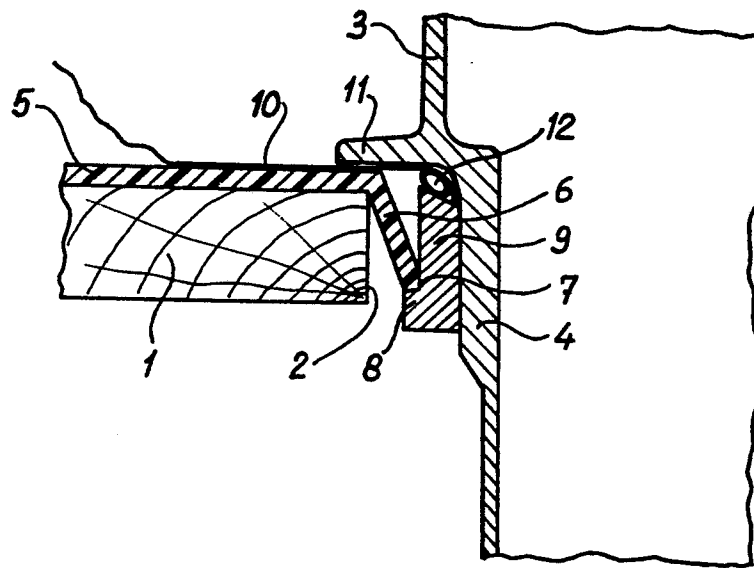
In case the housing by any cause is moved upwardly with regard to the pallet 1 in the first place the tongues are deformed and in a later state possibly the bottom may come loose of the pallet, but the connection of the bag with the valve remains  
5 undamaged by which leakage is avoided.

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Claim

Container for liquids of particulate bulk material comprising a container of cardboard, fiber or such rigid material with its bottom rests on a pallet (1), in which container an inner bag (10) is present out of plastic material, which container  
5 at the place of the bottom (5) is provided with drain means (2) comprising a valve housing (3) with valve operating means, which housing with a neck (4) extends through openings of the bag, oriented in one line with each other, the bottom and the pallet, which passage is sealed by clamping the edges of the openings of the bag  
10 (10), the bottom and the pallet together with one or more sealing rings between a flange or edge of the housing being present within the bag and a clamping ring positioned on the housing below the pallet, characterized in, that the edge of the opening of the bottom along the whole inner circumference is provided with radial incisions  
15 for forming the tongues (6) of which the base is present on the diameter that is nearly the same as that of the hole in the pallet and greater than the outer diameter of the neck of the valve housing, which tongues are bent downwardly and with their ends (7) support on an edge or shoulder (8) of a ring (9) fixed to the neck, and the  
20 edge of the opening of the bag is passed between the bottom and the flange (11) and extends to the neck around a seal clamped between a ring and a valve housing which seal also encloses the edge of the bag (10) extending downwardly along the neck.

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## EUROPEAN SEARCH REPORT

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Application number

EP 83 20 1068

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. 3)
A	FR-A-2 312 427 (LENFANTIN)		B 65 D 88/54
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A	FR-A-2 444 627 (VAN NIJNATTEN)		
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A	US-A-3 972 454 (CROLEY)		
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A	FR-A- 909 245 (MARTIN)		
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			TECHNICAL FIELDS SEARCHED (Int. Cl. 3)
			B 65 D F 16 K
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 10-10-1983	Examiner VAN ROLLEGHEM F.M.
<b>CATEGORY OF CITED DOCUMENTS</b>			
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	