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(54) Supporting element for plastic material tanks, drums and the like.

(57) The present invention relates to a supporting element (1) for plastic material tanks, drums and the like, which comprises a metal net (2) framework perimetrically encompassing a plastic material tank body(3) and the like.

The reinforcement framework is affixed, at its bottom edge portion, to a palletizable platform (15).

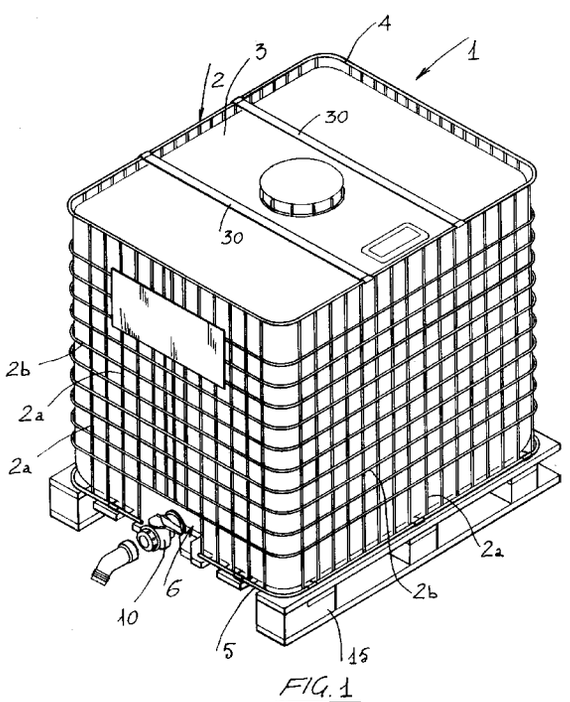

FIG. 1

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BACKGROUND OF THE INVENTION

The present invention relates to a supporting element for plastic material tanks, drums and the like.

As is known, there are at present broadly used, for holding and transporting liquids, several types of plastic material supporting elements, such as tanks, drums and the like, which have a high loading or holding volume, for example of 800-1000 litres.

However, in handling these supporting elements, there are encountered great safety problems, since these supporting elements, during the handling thereof, must be supported on pallets and, accordingly, they can be accidentally displaced during the transfer or transporting operations; moreover, these supporting elements are not suitable to properly resist against possible impacts, and they can be easily damaged or broken.

SUMMARY OF THE INVENTION

Accordingly, the aim of the present invention is to overcome the above mentioned drawbacks, by providing a holding supporting element for plastic material tanks, drums and the like, which allows the plastic material holding or containing element to be properly protected against possible impacts and the like.

Within the scope of the above mentioned aim, a main object of the present invention is to provide such a supporting element which, in addition to protecting the holding containing body proper, also provides the possibility of properly stabilizing the tank or drum on its supporting pallet, thereby preventing the tank or drum for being accidentally displaced during its handling or transport.

Another object of the present invention is to provide such a supporting or containment element which is very reliable in operation and which, moreover, can be easily made starting from easily available elements and materials and which, accordingly, is very competitive from a mere economic standpoint.

According to one aspect of the present invention, the above mentioned aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by a supporting or containment element for plastic material tanks, drums and the like, characterized in that said supporting element comprises a metal net framework perimetrically encompassing a tank body or the like, made of a plastic material, and being affixed, at a bottom edge portion thereof, to a palletizable platform.

BRIEF DESCRIPTION OF THE DRAWINGS

Further characteristics and advantages of the invention will become more apparent from the following detailed disclosure of a supporting or containment element for plastic material tanks, drums and the like, which constitutes a preferred embodiment of the invention and which is illustrated, by way of an indicative but not limitative example, in the accompanying drawings, where:

Figure 1 is a perspective view illustrating the supporting or containment element according to the invention as applied to a plastic material tank;

Figure 2 is a schematic plan extended view illustrating the framework constituting the supporting element according to the invention;

Figure 3 is a cross-sectional view illustrating a detail of the top edge portion of the framework;

Figure 4 illustrates the bottom edge portion of the framework;

Figure 5 illustrates schematically an operating step in which the net framework is bent to a desired shape;

and

Figure 6 is another cross-sectional view specifically showing fixing means for fixing the framework to a palletizable platform.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to the number references of the figures of the accompanying drawings, the supporting or containment element for plastic material tanks, drums and the like, according to the present invention, which has been generally indicated at the reference number 1, comprises a reinforcement or supporting framework, made of a metal net, which perimetrically encompasses a tank body 3, made of a plastic material.

More specifically, the metal net 2, as is better shown in Figure 2, is made as a flat metal net, and it comprises a plurality of crossing round rods; in particular there are provided columns 2a and rows 2b of round rods which mutually cross and being mutually electro-welded or coupled by known means.

At the top edge portion of the framework, there is provided an enlarged round cross-section rod, indicated at 4, whereas, at the bottom edge portion of the framework, there is provided a further enlarged round cross-section rod 5, defining a gap 6 arranged at the region of the metering or delivering cock or valve 10 of the tank or drum 3.

The metal net, as it is schematically shown in Figure 5, is bent at its corners, in order to perimetrically encompass the tank 3, so as to provide a strong and efficient supporting or containment cage.

In particular, the supporting framework, at its bottom edge portion, comprising the enlarged rod 5, can be affixed to a wood pallet 10, so as to provide a monolithic assembly.

In order to perform this connection, there are provided bridge elements 20, including a flat portion 21, provided for connection, through screws 22 to the pal-

letizable platform 15 and being moreover provided with a loop portion 23 which is superimposed on the rods 5 so as to hold them together, thereby providing a firm connection.

Moreover, at the mentioned top edge portion of the framework, there are provided connecting cross members, indicated at the reference number 30, which are arranged above the tank and connect to one another the opposite sides of the supporting framework, so as to provide an improved stabilization of the latter.

With the disclosed arrangement, therefore, there is provided a supporting element or construction, comprising a metal net framework which has the main function of protecting the tank 3 against impacts and the like and, which, moreover, provides the tank with a proper stability with respect to its supporting platform or pallet, so as to prevent the tank from undesirably displacing during its transport.

From the above disclosure it should be apparent that the invention fully achieves the intended aim and objects.

In particular, the fact is to be pointed out that there has been provided a supporting element which is very practical and functional, and which allows to properly "crate" a plastic material tank or the like, while providing the latter with a proper mechanical protection, in addition to operating as a stabilizing element preventing the tank from being displaced with respect to its supporting pallet during its transport or handling.

In practicing the invention, the used materials, though the best results have been obtained by using the above disclosed materials, as well as the contingent size and shapes, can be any, depending on requirements.

It is to be finally further pointed out that the supporting element according to the invention comprises a metal net supporting framework which perimetrically encompasses the tank or the like, and is made as a single piece the end portions of which are welded.

Claims

1. A supporting or containment element for plastic material tanks, drums and the like, characterized in that said supporting element comprises a metal net framework perimetrically encompassing a tank body or the like, made of a plastic material, and being affixed, at a bottom edge portion thereof, to a palletizable platform.

2. A supporting element, according to Claim 1, characterized in that said metal net framework is made of a plurality of round cross-section rods arranged in rows and columns, at the top edge portion of said framework, as well as at its bottom edge portion, there being provided an enlarged round cross-section rod.

3. A supporting element, according to the preceding claims, characterized in that said supporting element is provided, at the bottom portion of said framework, with a gap which can be arranged at the region on which there is provided the delivering cok or valve of the tank.

4. A supporting element, according to one or more of the preceding claims, characterized in that said supporting element further comprises means for fixing said framework to said palletizable platform, said fixing means comprising bridging elements including a flat portion which can be engaged by screw means for coupling to said platform and connected to a loop portion overlaying the bottom enlarged rod.

5. A supporting element, according to one or more of the preceding claims, characterized in that said supporting element further comprises cross-members connecting to one another the top edge portions of said framework.

6. A supporting element, according to one or more of the preceding claims, characterized in that said metal net supporting framework , which perimetrically encompasses said tank, is made in a single piece and has welded end portions.

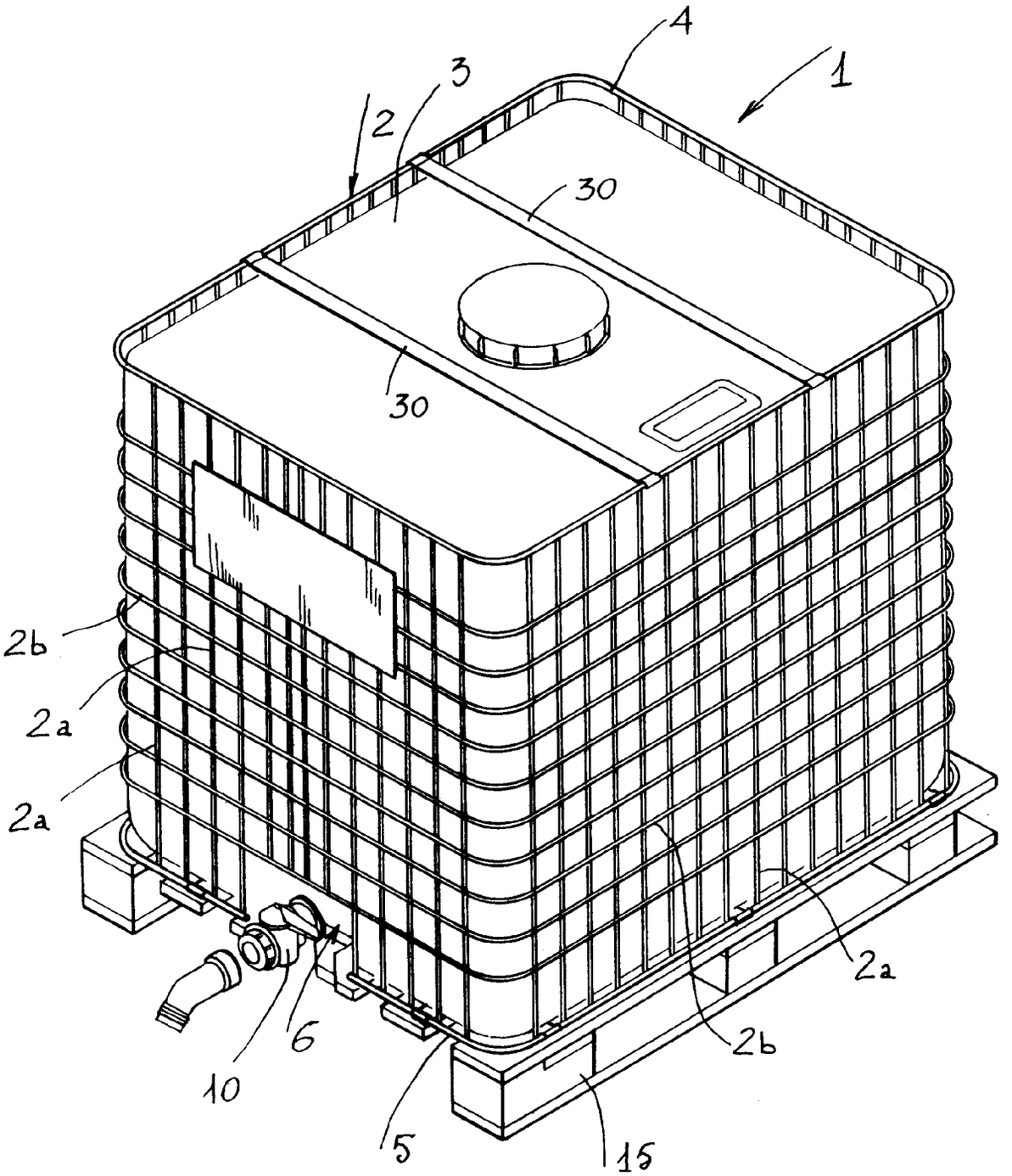

FIG. 1

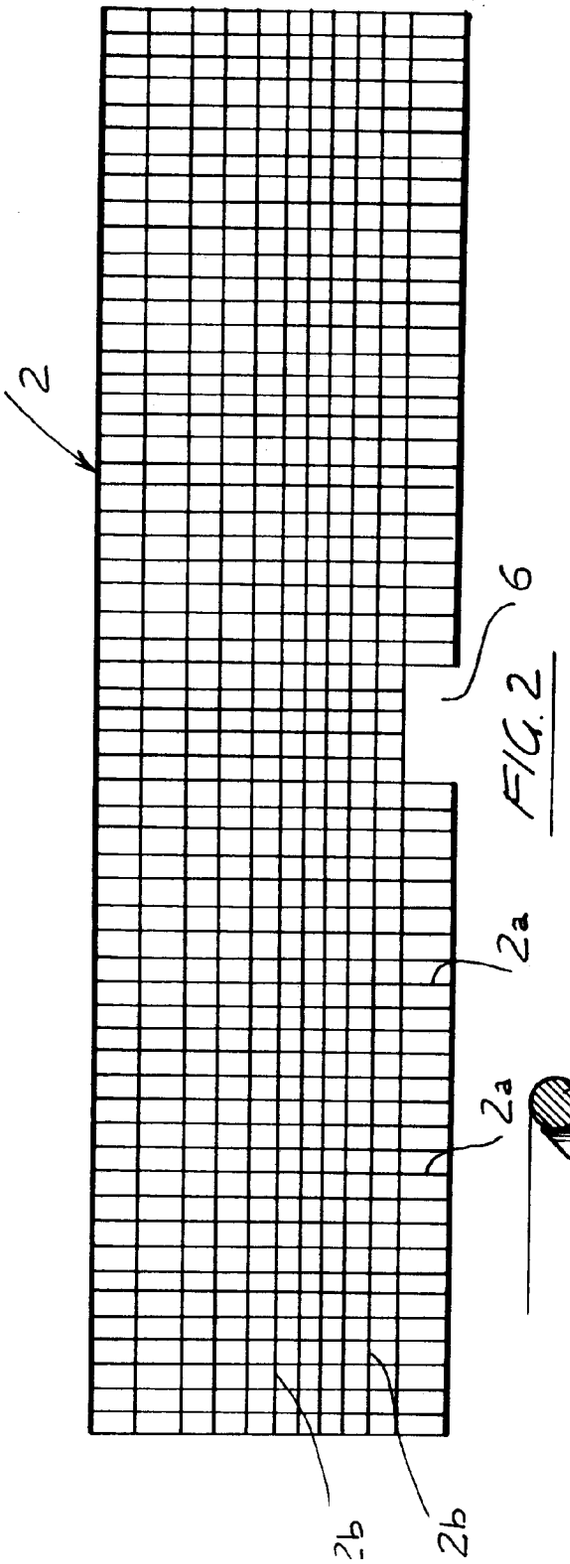

FIG. 2

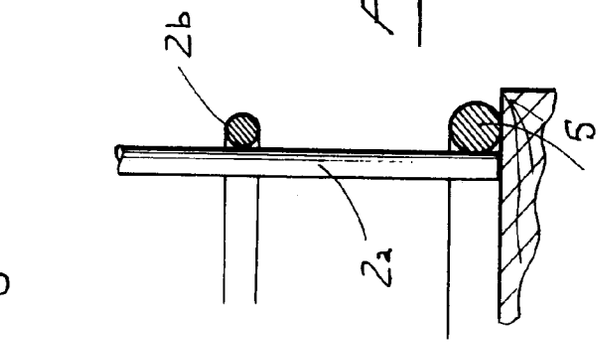

FIG. 4

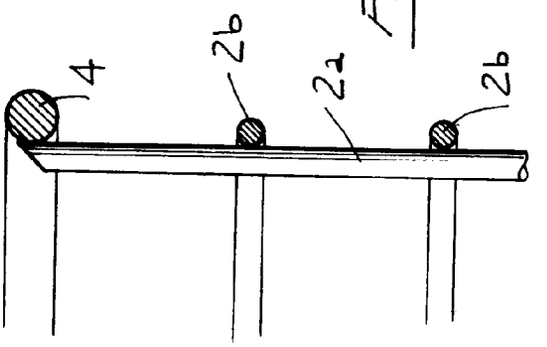

FIG. 3

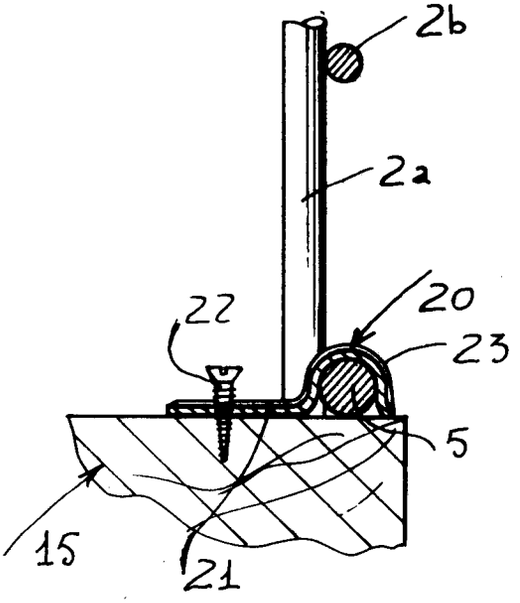

FIG.6

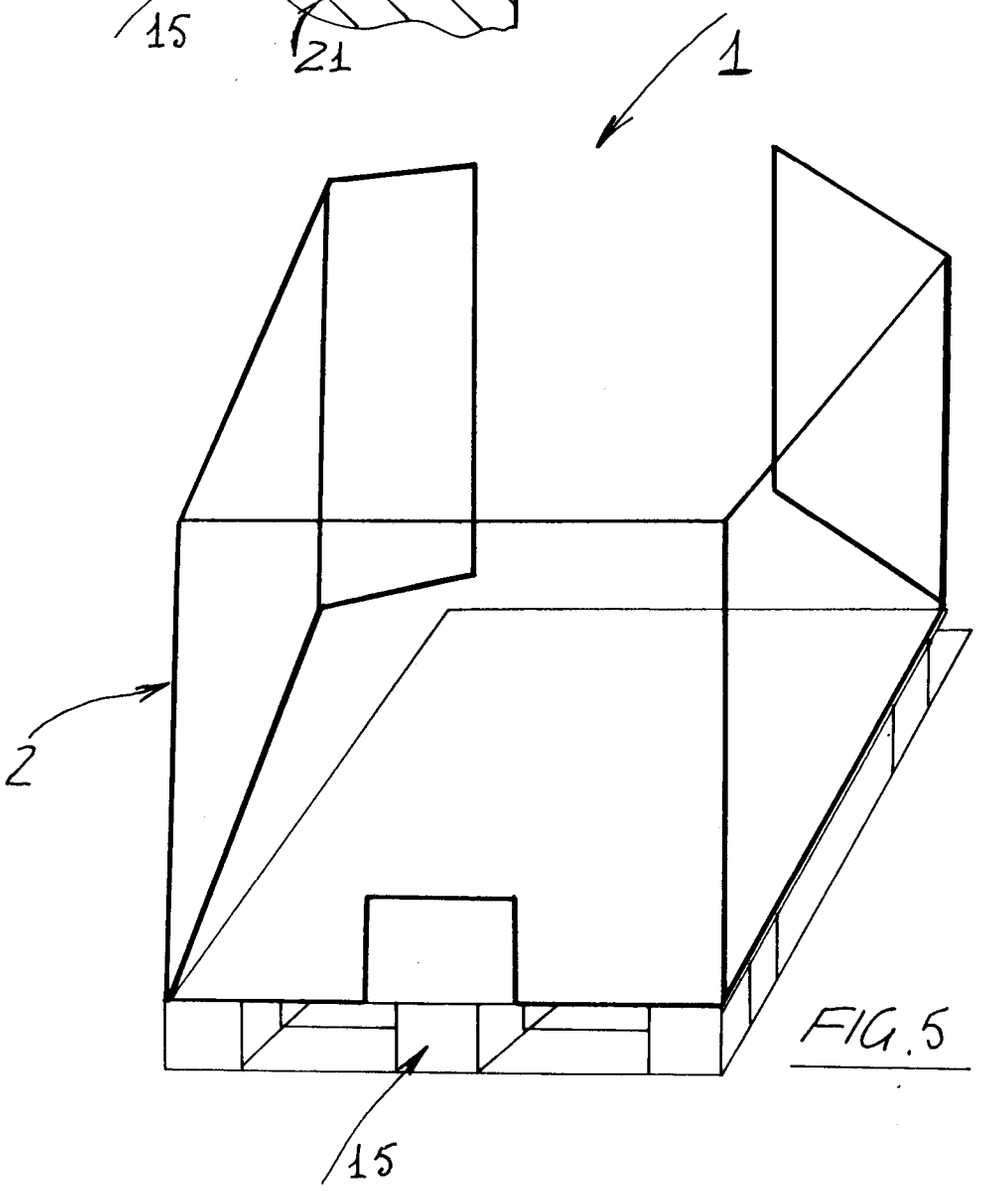

FIG.5

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 93 83 0307

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.5)
X	LU-A-82 555 (SOTRALENTZ S.A.) * figures *	1,3,4	B65D77/06
X	US-A-4 909 387 (SCHUTZ) * the whole document *	1-3,6	
X	EP-A-0 438 718 (SOTRALENTZ S.A.) * abstract; figures *	1,3,5	
X	EP-A-0 498 984 (HOOVER GROUP INC) * abstract; figures *	1,3,5	
X	DE-U-92 02 045 (MAUSER-WERKE GMBH) * figures *	1-3	
			TECHNICAL FIELDS SEARCHED (Int.Cl.5) B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	23 March 1994	Smith, C

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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