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(54) **Improved support for barrels**

(57) This support is constructed from a platform which is rectangular and hollow (1) in whose vertices tubular elements (4) are established for coupling with pillars (5), with the peculiarity that it also incorporates a pair of intermediate pillars (5'), which define two location areas for the placement of each barrel (6) which is supported on the platform with the collaboration of rods (7) which stabilise said barrels. Complementarily on the bottom of the platform there are pivots established (8) which couple in the pillars (5) in the stacking of sup-

ports, but with these pivots (8) dephased respecting the pillars (5), which permits that in stacking the supports, the same are alternatively dephased and, more precisely, that the barrels (6) adopt a quincunx formation, determining optimum accessibility to each and every one of them, upon each barrel adopting an intermediate position respecting the two situated on the levels above and below it.

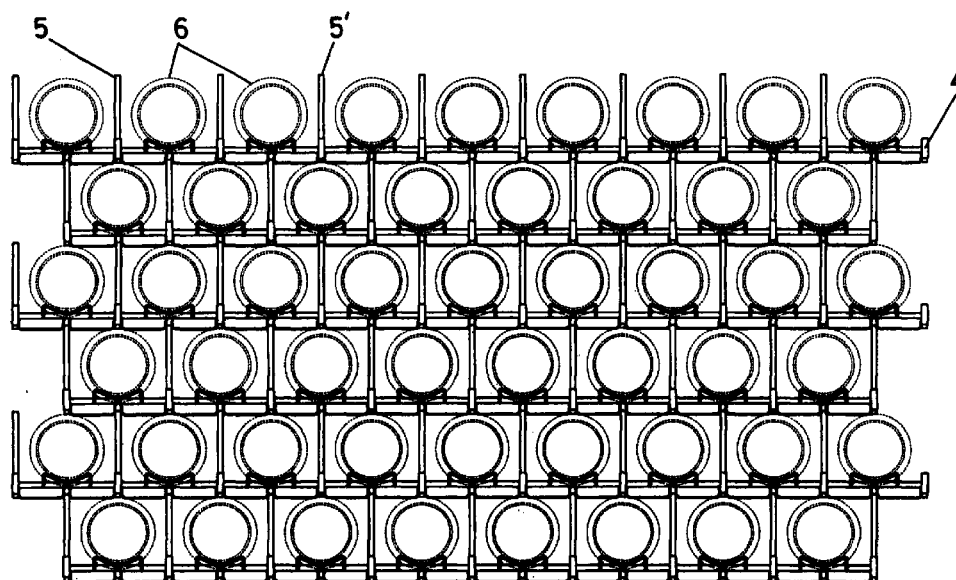


FIG.4

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Description

OBJECT OF THE INVENTION

[0001] The present invention refers to a support for barrels, of special application in large wineries, which permits their accumulation, supported stably in a lateral manner without having to support the weight of those stored above as the support is modular and is conceived basically to support a pair of barrels stored col-
laterally with it being only the supports, in their coupling upon being stacked, that support the weight above them with the barrels only supporting their own weight.

[0002] It is the purpose of the invention to achieve the stacking of the barrels in said supports in a quincunx position, permitting greater access to each of them for cleaning as well as for the transfer of their contents, without the necessity of moving them, and also obtaining a substantial improvement in the aesthetic aspect of the winery with a distribution similar to a conventional one.

ANTECEDENTS TO THE INVENTION

[0003] In large wineries, the maturation of wines in barrels is achieved through the accumulation or stacking of the same, in a lateral position, that is, with their bases in vertical position, in such a way that the inferior level of the barrels is supported between pairs of beams, appropriately shaped, paralleled so that they impede the movement of the barrels thereby stabilising their positions.

[0004] The following layers of barrels are achieved by stacking them, one upon the other, that is, in quincunx, always supported by wedges, and stacked to the necessary height, with the logical limit imposed by the height of the winery.

[0005] This system of piling, which is commonly used in large wineries for maturing wine, presents a number of problems and inconveniences, which are the following:

- A lack of security in the stability of the barrels, given that said stability is achieved only through the wedges and in case these fail, there could logically be a rolling of the barrels produced, or rather a collapse of the stacks with the consequential risk of harm to workers who may be operating in the interior of the winery apart from the economic costs implied.
- With the barrels forming levels, one supporting the other, they are difficult to manipulate.
- The barrels situated on the lowest levels must support the weight of all those above. Obviously, a barrel is manufactured taking into account the function it will exercise and the weight that its contents imply

when full, for which reason barrels are not usually conceived for supporting elevated weights, therefore during stacking, and due to the facts previously expressed, they may become deformed or even damaged.

[0006] In order to remedy this problem, the present applicant holds the title to Spanish utility model with the number U9801070, consisting in a support for barrels constructed in the form of a rectangular structure, based on longitudinal beams and transversal beams upon which bars are established for supporting the barrels, with pillars or columns emerging from the structure and constituting the base of the support, in correspondence to its vertices, which constitute the dividing elements for support of the platform or structure corresponding to the support immediately above, in the necessary stacking of the supports and, consequently, barrels.

[0007] In accordance with the structuring of this utility model, the pillars or columns corresponding to the superimposed supports are in line, as are the barrels, so that if one is to achieve optimum space efficiency, the superimposed barrels end up very close to one another making access to them very difficult, from the standpoint of cleaning as well as the habitual transferring of the wine contained in one of them to an inferior position, as access to their openings remains drastically restrained due to this proximity. This implies that in order for such manipulations to be carried out satisfactorily, it is necessary to unstack the barrels temporarily with the consequent and negative repercussions implied from the economic point of view.

DESCRIPTION OF THE INVENTION

[0008] The barrel support that invention proposes, with a basic structure similar to the utility model 9801070 has been notably improved in order to solve the series of problems mentioned above.

[0009] To do so, and more precisely, the new support centres its characteristics in the fact that, besides the four pillars or columns corresponding to the vertices of the base structure, which can be taken apart or folded to minimise the millimetric space occupied by the support in its inoperative position or when being stored, it incorporates two other intermediate pillars, situated halfway between its two longest sides, those corresponding to its front and back, with the particularity that besides the means established in the lower side of the base structure for fastening the pillars of the support immediately below, instead of being placed in correspondence with the pillars of the support itself, they are dephased in respect to them, more precisely, in front of the halfway point of each of the two halves defined by the intermediary pillars, that is, in front of the polar zone below the pair of barrels situated on the support.

[0010] Thanks to this special structuring when the

supports are assembled or stacked, each one remains substantially dephased in the longitudinal direction with respect to those above and below, which insures that the barrels assume a quincunx distribution, i.e., that the superior polar zone of each barrel occupies the space defined between the two barrels immediately above, that is, in a position of optimum accessibility.

[0011] The special quincunx distribution not only achieves that the barrels, besides resemble the classic distribution in which the barrels remain piled directly one on top of the other, but also permits greater accessibility to the entire perimeter of each of them, for the purposes of cleaning as well as the transfer of their contents, as formerly mentioned, to which must be added the extra advantage that, owing also to this peculiar distribution, the total height of the pillars may be considerably less, providing more efficient use of available space.

DISCRIPTION OF THE DRAWINGS

[0012] To complete the description being made and in order to improve comprehension of the characteristics of the invention, according to the preferred example of how to put the same into use, there is a set of drawings, forming and integral part of the same, where with a an illustrative and non-limitative quality, the following has been represented accompanying this description:

Figure 1. Shows the raised frontal schematic representation of a support for barrels made according to the procedures object of this present invention, over which there appear, in discontinuous lines, two of the barrels for which it has been conceived.

Figure 2. Shows the profile of the set represented in the former figure.

Figure 3. Shows a top view of the same set.

Figure 4. Shows, finally, a raised frontal schematic representation of a number of supports as in figure 1 properly connected forming a stack of longitudinal rows.

PREFERABLE CONSTRUCTION OF THE INVENTION

[0013] As can be seen in these figures, one can observe how the support for barrels which the invention supposes is constructed of a base structure (1) which includes longitudinal (2) and transversal (3) beams forming a type of rectangular hollow platform, in whose vertices are established tubular elements (4), which are vertical and of short height, in which pillars (5) are coupled by insertion, constituting dividers in the stacking between supports, although these pillars (5) may be folded instead of dismountable, in any case, in order to reduce the volumetric space of the support in its opera-

tion position.

[0014] In accordance with the invention, the support centres its characteristics in the incorporation of a pair of intermediate pillars (5') which limit the two placement areas for barrel spaces (6) which is supported over the base structure with the collaboration of rods (7) properly configured for stabilising said barrels.

[0015] To complete the described structure, the base structure (1) incorporates pivots (8) in its lower surface, or instead, slots destined for tongued coupling of the upper extremity of the pillars (5-5') of the supports situated on a lower level, with the special peculiarity, as can be especially observed in figure 1, that these tongued coupling elements (8) are dephased with respect to the pillars (5-5') of the support itself, more precisely, situated in the mid zone defined between each pair of adjacent pillars (5-5') with which in the stacking of these supports and as can be observed in especially in figure 4, a quincunx configuration is achieved and, consequently, that the barrels adopt this same configuration (6).

[0016] As may also be noted in observing figure 4, this special distribution of the barrels, derived as well from the special configuration of the support of the invention, implies that the upper and lower extreme zones of each barrel end up laterally dephased to the maximum respecting the adjacent barrels, in such a way that the accessibility to each of said barrels (6) is optimum for cleaning as well as transferring their contents. Besides, and as formerly mentioned, as two barrels (6) are never placed one above the other, but rather totally dephased, the pillars (5 - 5') can be noticeably shorter than in the contrary case, reducing the height of the support in its set and, consequently, reducing the occupation of volumetric space in its place of assembly as shown in figure 4, which permits more economic use of the space available in the winery.

Claims

1. An improved support for barrels, which, being of special application in large wineries for supporting barrels of maturing wine and being of the type that incorporated a base structure, consisting in a rectangular platform, of the appropriate dimensions for the placement of a pair of barrels, which base structure is provided with, in correspondence with its vertices of pillars or columns acting as dividers in the stacking between supports, and preferably dismountable or foldable, and is also characterised by the fact that said structure incorporates another pair of pillars complementary to those mentioned and situated mid level from its front and back sides and also preferably dismountable or foldable, with it being foreseen that the tongued means of coupling for the pillars, established in the bottom of the base structure for stabilising in the stacking among supports, remain dephased with respect to the pillars in

the centre of each support, more precisely, situated at mid level between each pair of adjacent pillars, so that the supports when stacked together are dephased longitudinally in superimposed rows, with the barrels adopting in their placement quincunx distribution with easy access to their entire perimeter.

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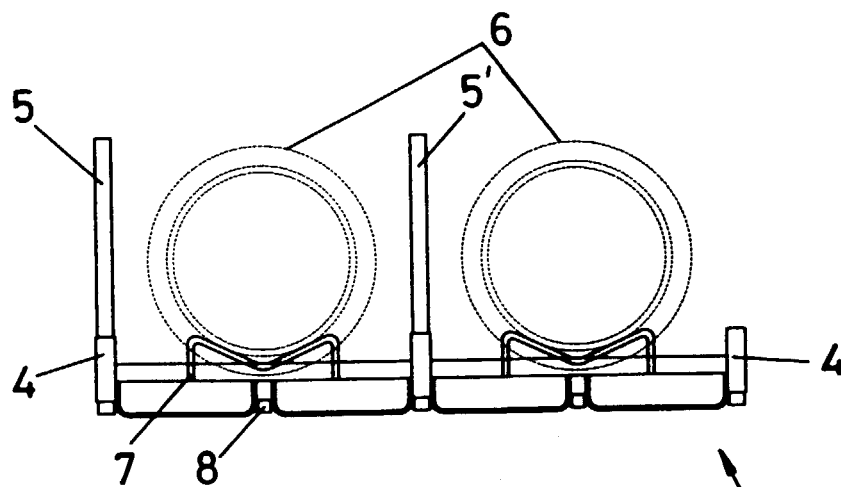


FIG.1

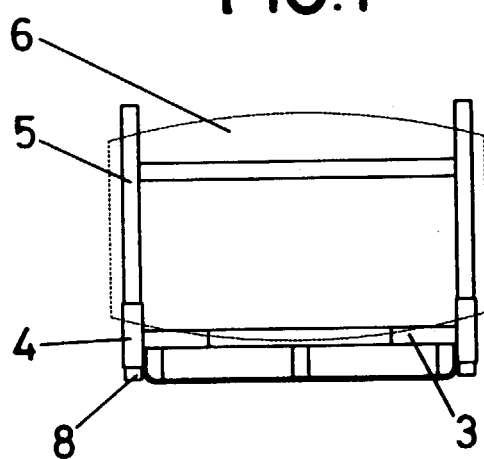


FIG.2

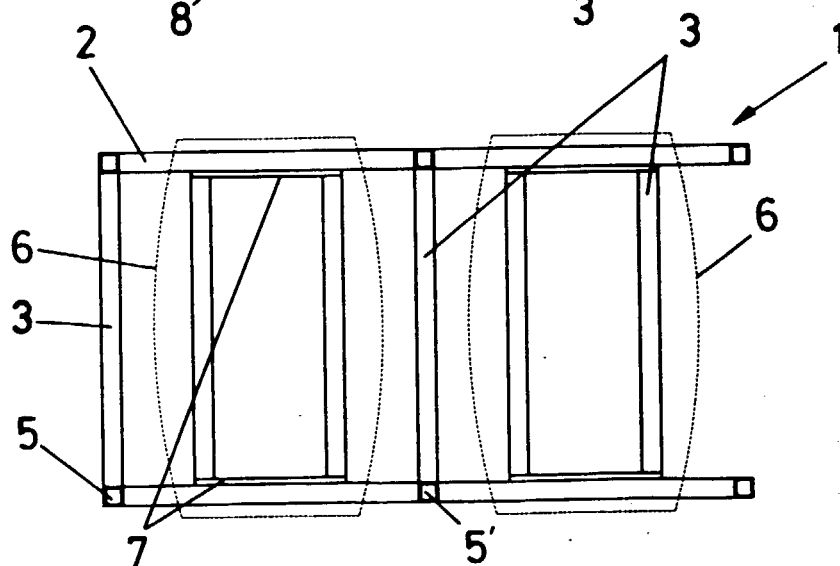


FIG.3

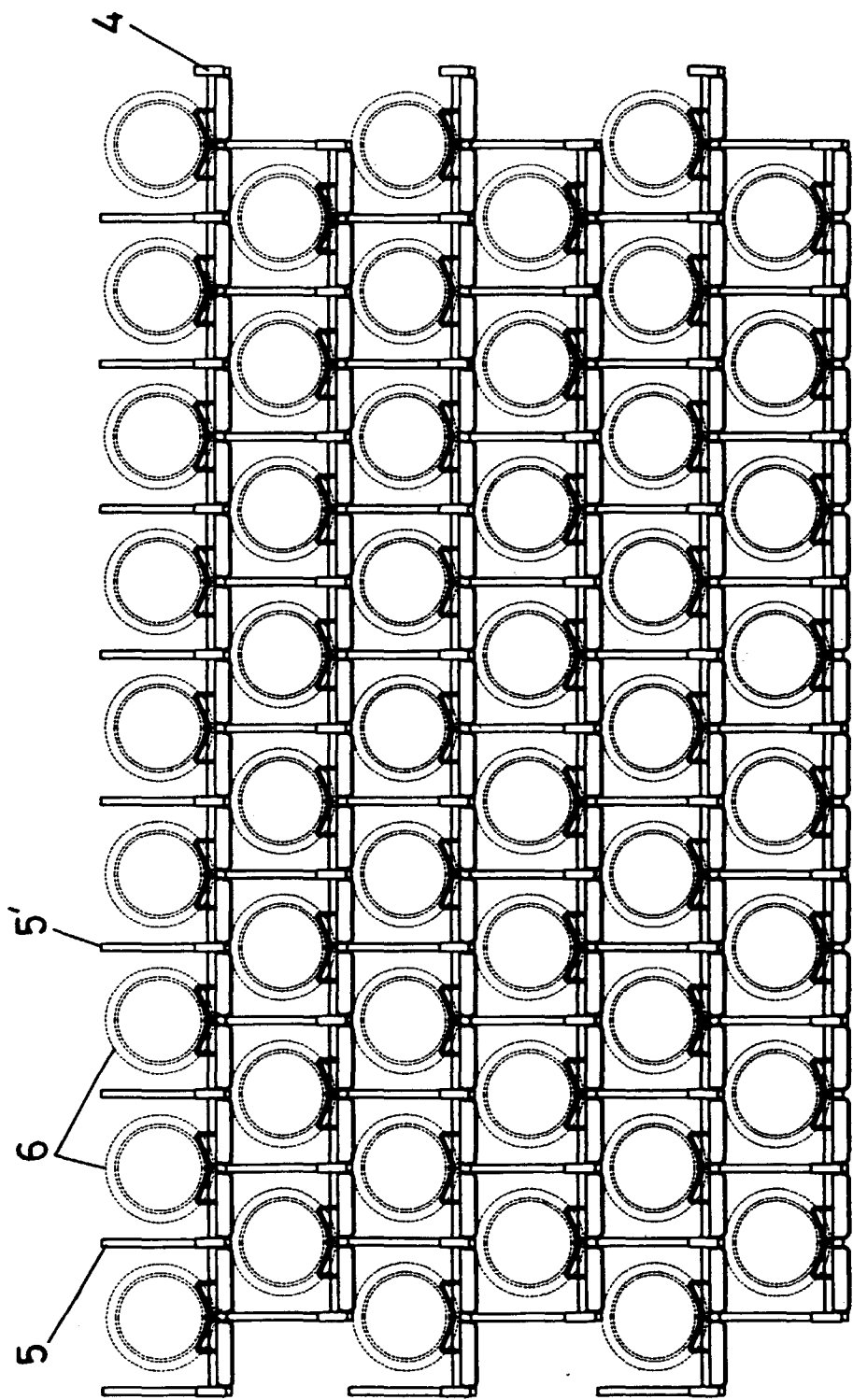


FIG.4



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EUROPEAN SEARCH REPORT

Application Number
EP 99 50 0085

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.7)
A	FR 2 106 986 A (MATECNOR) 5 May 1972 (1972-05-05) * page 3, line 1 - page 5, line 18; figures 1-5 *	1	B65D19/38
A	FR 2 436 080 A (SOC. EUROPÉENNE DE BRASSERIES) 11 April 1980 (1980-04-11)		
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B65D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26 October 1999	Examiner Martens, L
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EPO FORM 1503 03.82 (P4/C01)

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

EP 99 50 0085

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
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26-10-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 2106986 A	05-05-1972	NONE	
FR 2436080 A	11-04-1980	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82