

(14)

Description

The invention relates to a tiered rack for displaying articles in accordance with the preamble of Claim 1.

A tiered rack of this type is known from DE-A-2 153 603.

In this embodiment the tier base is rectangular in outline and four spacing supports are provided respectively between two successive tier bases.

The invention is based on the object of reducing the number of spacing supports with a view to simplifying assembly and facilitating access to and inspection of the articles on the individual tier bases, while retaining stability.

To achieve this object, according to the invention the measures in accordance with the characterising part of Claim 1 are proposed.

US-A-3 538 862 and German Gebrauchsmuster specification 7 135 642 disclose tiered racks in which the spacing between two successive tier bases is spanned respectively by two spacing supports. However, none of these citations discloses the curved shape of the enclosing wall to form the accommodating spaces. Similarly, these specifications fail to disclose the channel-shaped section of the spacing supports.

Finally, from DE-A-2 261 983 it is known for round tier bases to be provided in a tiered rack, in which case the spacing supports are then in the form of circular arc sections at their ends. In this known embodiment, however, there is no possibility for the respective spacing supports to be provided only on edges of the enclosing wall lying opposite along a centre line of the tier bases and for this wall to be formed here as a curved space-delimiting wall.

A further embodiment of the invention lies in that the wall elements are situated opposite the respective channel section laterally of the crown of the channel section, and in that locating means are provided in the

vicinity of the crown of the channel section. This embodiment ensures a high degree of stability of the connection between the spacing supports and the tier bases, even if the channel section is of relatively small size; the
5 spacing supports are prevented from being removed from the tier base in the vicinity of the crown.

This embodiment can be developed in a preferred manner in accordance with Claim 3, wherein the spring affords easy engagement and also, in particular, easy
10 disengagement.

The measures of Claim 4 ensure a further increase in stability, particularly in conjunction with the measures of Claim 2.

The measure of Claim 5 has the aim of facilitating
15 the assembly of the spacing supports and tier bases.

Channel sections in accordance with Claim 6 of semicircular cross-section are of considerable significance not only with respect to stability but also with respect to the visual aspect.

The measure of Claim 7 provides additional storage
20 space on the tier bases and at the same time enhances the visual aspect.

The drawings illustrate the invention on the basis of one example of embodiment, wherein

25 Fig. 1 shows an assembly diagram of a tiered rack according to the invention;

Fig. 2 shows a plan view of part of a tier base in the region of an accommodating space, in the direction of arrow II;

30 Fig. 3 shows a section along the line III-III in Fig. 2;

Fig. 4 shows an elevation of the concave side of a spacing support according to the invention, and

35 Fig. 5 shows an end view of a spacing support in the direction of arrow V in Fig. 4.

In Fig. 1 a tiered rack is generally designated 10. This tiered rack comprises a plurality of tier bases 12 and respectively two spacing supports 14 between successive tier bases 12.

As evident from Fig. 1, each tier base 12 is surrounded by an enclosing wall 16 extending upwardly and downwardly, preferably equidistantly perpendicular to the respective tier base.

5 An accommodating space 18 on a tier base 12 is shown in Fig. 2. This accommodating space 18 is defined by a curved space-delimiting wall 20 which forms part of the enclosing wall 16. The accommodating space 18 is defined additionally by short wall elements 21. These wall
10 elements 21 are situated opposite the curved space-delimiting wall 20 at an approximately uniform distance therefrom and are situated on either side of the crown 22 of the curved space-delimiting wall 20 equidistantly from this crown 22. At their ends remote from one another the wall
15 elements 21 do not extend as far as the ends of the curved space-delimiting wall 20. Dogs 24 and 26 are provided on the curved space-delimiting wall 20, that is on the concave side thereof.

 Figs. 4 and 5 shows the channel-shaped spacing
20 support 14 which extends through the same curve angle as the curved space-delimiting wall 20 and which is intended to be inserted into the accommodating space 18. The spacing support 14 is provided near to its longitudinal edges with recesses 30 which serve to accommodate the dogs 24 when one
25 end of the spacing support 14 is inserted into an accommodating space 18. In this case the edge zones 32 of the spacing supports are deflected from the curved space-delimiting wall 20 until the cams 24 are able to snap into the recesses 30, whereupon the edge zones 32 spring back
30 into abutment against the curved space-delimiting wall 20. In the vicinity of its crown, the spacing support 14 has a spring 34 at its upper and lower end respectively. The springs 34 are formed by slots 36 so that these springs 34 can be tilted resiliently about the axes 38. The springs 34
35 are provided with recesses 40 which can accommodate the dogs 26 of the curved space-delimiting walls 20 when one end of a spacing support 14 is inserted into the accommodating space 18. The springs 34 then deflect inwardly away from the

curved space-delimiting wall 20 until the dog 26 snaps into the associated recess 40. It is then possible for the spring 34 to return into abutment with the curved space-delimiting wall 20. The slots 36 can be higher than the enclosing wall 16 so as to facilitate disengagement of the spacing supports 14. However, if this dimensional specification is not adhered to, a blade can be inserted behind the springs 34 so that they are deflected for disengagement purposes.

Fig. 3 shows the shape of the dogs (they are are formed with guide slopes), which enables the spacing supports to be readily inserted into the space until the dogs 24 engage in the recesses 30. The same applies to the shape of the dogs 26.

When the dogs 24 and 26 are engaged in the recesses 30 and 40, the respective spacing support 14 is disposed substantially without play with its respective end edge on the respective tier base 12.

The tier bases 12 with the enclosing wall 16 and with the inner space-delimiting walls 21 and also the locating dogs 24 and 26 can be produced as integral injection-moulded parts, the inner space-delimiting walls 21 merely being connected to the tier bases 12 and starting from the latter project freely. It is also possible for the spacing supports 14 to be produced as integral injection-moulded parts together with the recesses 30 and 40 and slots 36.

Both the tier bases and the spacing supports can be made of transparent material, for example transparent plastics material, so as to improve even further the view of the articles stored on the tier bases 12.

Of course, modifications can be made to the embodiment described above; thus it is possible for the dogs 24 and 26 to be provided on the spacing supports 14 and, moreover, for the recesses to be provided in the outer space-delimiting wall 20.

CLAIMS



1. A tiered rack for displaying articles, with a plurality of tier bases (12) each of which is surrounded at least along part of its periphery by an upwardly and downwardly projecting enclosing wall (16), wherein between the enclosing wall (16) and wall elements (21) situated opposite thereto accommodating spaces (18) are formed for receiving detachable spacing supports (14) which can be located in form-locking manner in the vicinity of the accommodating spaces (18), which stand upright on the respective tier base and which extend respectively between two successive tier bases (12), characterised in that to form the accommodating spaces (18) on only two respective edges lying opposite one another approximately along a centre line of the tier bases (12) the enclosing wall (16) is formed as a curved space-delimiting wall (20) and the two respective spacing supports (14), corresponding to the space-delimiting wall (20), are channel-sectioned.
2. A tiered rack according to Claim 1, characterised in that the wall elements (21) are situated opposite the respective channel section laterally of the crown of the channel section, and in that locating means (26, 40) are provided in the vicinity of the crown of the channel section.
3. A tiered rack according to Claim 2, characterised in that at the end of the channel section in the vicinity of the crown a spring (34) is formed by slots (36), a recess (40) intended to engage with a dog (26) being formed in said spring.



4. A tiered rack according to one of Claims 1 to 3, characterised in that the channel section projects laterally beyond the wall elements (21), and in that locating means (24, 30) are provided in the vicinity of the projecting portions.

5. A tiered rack according to one of Claims 2 to 4, characterised in that the dogs (24, 26) are formed with guide slopes.

10

6. A tiered rack according to one of Claims 1 to 5, characterised in that the channel sections are of approximately semicircular cross-section.

15 7. A tiered rack according to one of Claims 1 to 6, characterised in that the channel sections face one another with their concave sides.

((DRAWINGS))