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(54) Method for displacing a modular shop rack

(57) In the method for displacing a modular shop rack, the modules of which comprise standards (1) having shelves (4) mounted thereon, which standards (1) are each provided with a foot (2) supported by little legs (6), a carrier element (9) is applied alternately underneath the different modules so that its both extremities

(10) extend underneath the feet (2) of the standards (1) which are situated on both sides on the respective module, said carrier element (9) and the modules supported thereby are jacked up, and a little cart (12) is placed underneath each of the jacked up carrier elements (9) so that the shop rack can be displaced without having necessarily to be emptied.

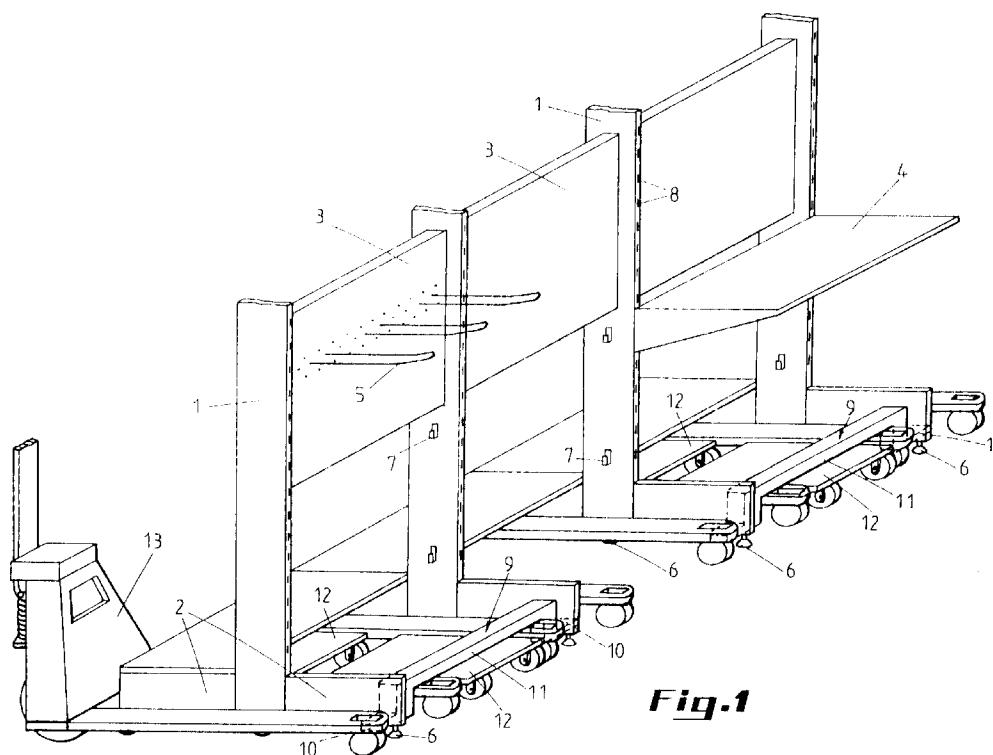


Fig.1

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Description

The invention relates to a modular shop rack the modules of which comprise standards having shelves mounted thereon, which standards are each provided with a foot supported by little legs.

Such shop racks are employed in practice in different possible embodiments in smaller and larger shops or department stores. They form long rows onto which the articles are displayed onto shelves or possibly also on rods. Usually, the shelves are arranged both at the front and at the back of the shop racks but there also consist so-called wall models having only shelves at the front.

The shop racks are made up of transverse, generally inverted T-shaped standards which are usually connected to one another by means of vertical wall panels. Rods for suspending merchandise can be fixed to these wall panels whilst the desired shelves can be fixed to the standard themselves. In practice, the wall panels and the shelves are hooked together to the standards without any further locking by means of screws or the like, which enables a quick assembling and disassembling.

Consequently, when a store rack has to be displaced, it is common practice to first empty the store rack and to disassemble the rack subsequently and assemble it on another place again. Notwithstanding the fact that the shop racks are provided to do this in a simple and fast way, this operation still remains very time consuming. Sometimes, it is tried to displace the emptied shop rack over the ground, whereto soap is applied onto the ground for enhancing sliding, but depending on the floor this is not always possible whilst emptying and filling the shop racks again still takes a lot of time.

An object of the invention is therefore to present a new method for displacing modular shop racks which enables to displace a shop rack as a whole even without having to empty this necessarily in advance.

To this end, the method according to the invention is characterised in that a carrier element is applied alternately underneath the different modules so that its both extremities extend underneath the feet of the standards which are situated on both sides of the respective module, said carrier element and the module supported thereby are jacked up, and a little cart is placed underneath each of the jacked up carrier elements, the carrier element is lowered thereon and the shop rack is moved thereby, after which the carrier elements are jacked up again, the carts are removed and the shop rack is lowered again.

Surprisingly, it has been found that notwithstanding the loose modular construction of the shop racks it is possible, by making use of carrier elements which are applied alternately underneath the different modules, to jack up the shop rack and to move it onto little carts without the shop rack falling into pieces. In this way, it is even not necessary to empty the shop rack in advance.

In a preferred embodiment of the method according to the invention, use is made of carrier elements having a raised middle portion, the carts being placed underneath this raised middle portion so that the shop rack has to be jacked up only over a limited height.

In a further preferred embodiment of the method according to the invention, use is made of movable pallet trucks for jacking up the carrier elements and the shop rack supported thereby.

Further particularities and advantages of the invention will become apparent from the following description of a particular embodiment of the method for displacing a modular shop rack according to the invention. This description is however only given by way of example and is in no way intended to limit the scope of the invention. The used reference numerals relate to the annexed drawing wherein :

Figure 1 shows schematically a perspective view of a part of a shop rack which has been partially disassembled for clarity's sake and which has been jacked up by means of pallet trucks ; and

Figure 2 shows, on a larger scale, a detail from the jacked up shop rack from figure 1.

The shop rack shown in figure 1 is build up modularly and comprises standards 1 which are provided at the bottom with a foot 2 and which are fixed to one another by means of back panels 3. On the standards 1, shelves 4 are mounted onto which the wares can be displayed. Instead of shelves 4, it is also possible to provide rods 5 whereto certain products can be suspended and which are for example fixed to the back panels 3. Underneath the feet 2 of the standards 1, there are further provided little legs 6 which are normally adjustable in order to enable to compensate for possible floor irregularities. Possibly, the legs 6 are not mounted separately onto the feet 2 but they can be formed by a downwardly projecting portion of the foot itself.

In practice, use is not made of screws or the like for assembling such shop racks but the standards 1 are provided for example laterally with upright hooks 7 wherein the edges of the back panels 3 are fixed by sliding thereover. For fixing the shelves 4, they are provided at the back with hooks by which they can be hooked in slots 8 in the standards 1. This can be done both in the front and in the back of the standards 1. Due to these hook connections, the shop rack is simple to assemble and disassemble. A drawback is however that it is difficult to be displaced as a whole due to the fact that these hook connections can be released very quickly.

The method according to the invention enables now to displace such a shop rack, even with all the wares left thereon, without the shop rack falling into pieces. First of all, carrier elements 9 are applied hereto alternately underneath the different modules of the shop rack, more particularly with both extremities 10 underneath the feet 2 of the standards 1 which are situated at both sides of

the respective modules. Preferably, the middle portion 11 of the carrier elements 9 is raised, more particularly inverted U-shaped, so that the shop rack has to be jacked up less high, as will become apparent hereinafter, in order to permit the necessary jacks and little carts 12 to be placed underneath the carrier elements 9.

For jacking up the shop rack, use can be made of so-called pallet trucks 13 or of possible analogous pneumatic or mechanical jack systems. The fork of the pallet trucks 13 is each time driven around the foot 2 of a standard 1 so that at least one leg thereof is situated underneath an extremity of the raised middle portion 11 of the carrier element 9. As shown in figure 1, a carrier element 9 is preferably applied both underneath the front and underneath the back of the different standard feet 2. The use of pallet trucks 13 with a sufficiently long fork enables then to jack up the shop rack simultaneously at the front and at the back.

When a first part of the shop rack has been jacked up, for example with some 4 to 5 pallet trucks 13, the necessary carts 12 can already be driven underneath the first carrier elements 9. These carts 12 can be kept very simple and consist for example of a square plate having four castor wheels mounted thereunder. The height of the carts 12 is such that they can be driven just underneath the carrier elements 9 after having jacked up the shop rack over for example some 3 cm. Subsequently, the jacked up part of the shop rack is lowered onto the carts 12 and a next part of the shop rack can be jacked up by means of the same pallet trucks 13 onto further carts 12. When the entire shop rack is supported by carts 12, it can be driven to the desired place. In view of the large weight which may rest on the shop rack, it may sometimes be appropriate to divide the rack in several pieces before displacing it, for example in pieces of 9 to 11 meters (in case of modules having a length of 1 meter), in order that it would still be possible to displace the shop rack manually. Of course, one module has to be emptied and disassembled to this end, which costs however far less time than emptying and disassembling the entire shop rack.

In order to exclude all risks of a shop rack still falling into pieces, for example in case expensive, fragile products are displayed onto this shop rack, the invention provides the possibility to lock the back panels 3 with respect to the standards 1. As shown in figure 2, this can be achieved simply by means of a piece of a threaded rod 14 which is bent at the bottom in the form of a hook so that this hook 15 can be firmly hooked through the hollow standard 1 in a slot 8 thereof. At the top of the standard 1, a cap 16 is applied then over the threaded rod 14 and screwed down by means of a nut 17 against the top of the back panel 3. In this way, this back panel 3 can thus no longer be lifted out of the hooks provided on the standards 1 so that the shop rack can consequently no longer fall into pieces.

In a variant embodiment of the method according to the invention described hereinabove, use is made of

hydraulic jacks instead of pallet trucks. These jacks are placed in particular underneath the raised middle portion of the carrier elements 9 and this at the sides so that sufficient place is left over for positioning the little carts 12. These hydraulic jacks are preferably interconnected by means of a hydraulic duct so that they can be raised and lowered simultaneously. Further, it is preferable to position these jacks underneath the entire shop rack or underneath the entire part divided therefrom so that it can be jacked up as a whole and so that there is consequently no risk that certain hook connections come loose.

From the description given hereinabove, it will be clear that the method according to the invention can be applied to various known types of shop racks and that all kinds of modifications can be applied to this method without leaving the scope of the appended claims.

In the described and shown embodiment, separate carts have for example been driven underneath the front and the back of the modules of the shop racks but, instead of using two carts, it is also possible to use only one cart extending underneath the entire width of the shop rack.

Claims

1. A method for displacing a modular shop rack, the modules of which comprise standards (1) having shelves (4) mounted thereon, which standards (1) are each provided with a foot (2) supported by little legs (6), characterised in that a carrier element (9) is applied alternately underneath the different modules so that its both extremities (10) extend underneath the feet (2) of the standards (1) which are situated on both sides of the respective module, said carrier element (9) and the module supported thereby are jacked up, and a little cart (12) is placed underneath each of the jacked up carrier elements (9), the carrier element (9) is lowered thereon and the shop rack is moved thereby, after which the carrier elements (9) are jacked up again, the carts (12) are removed and the shop rack is lowered again.
2. A method according to claim 1, characterised in that use is made of carrier elements (9) having a raised middle portion, the carts (12) being placed underneath this raised middle portion (11).
3. A method according to claim 1 or 2, characterised in that the carrier elements (9) are each jacked up on both sides underneath the raised middle portion (11), during this jacking up the required intermediary space being left clear for applying the carts (12).
4. A method according to any one of the claims 1 to 3, characterised in that for jacking up the carrier elements (9) and the shop rack supported thereby, use

is made of movable pallet trucks (13).

5. A method according to any one of the claims 1 to 3, characterised in that for jacking up the carrier elements (9) and the shop rack supported thereby, use is made of hydraulic jacks. 5
6. A method according to claim 5, characterised in that said jacks are interconnected by means of a hydraulic duct and these jacks are raised and lowered simultaneously. 10
7. A method according to any one of the claims 1 to 6 for displacing a modular shop rack having a front and a back each provided with shelves (4), characterised in that both at the front and at the back of the shop rack one of said carrier elements (9) is applied alternately underneath the different modules. 15
8. A method according to claim 4 and 7, characterised in that one of said carrier elements (9) is applied alternately underneath the different modules, both underneath the front and the back thereof, the pallet trucks (13) used for jacking up the shop rack being passed transversally underneath the shop rack for jacking up and lowering, after the displacement, the carrier elements (9) at the front and the back of the respective module simultaneously with a same pallet truck (13). 20 25 30
9. A method according to any one of the claims 1 to 8, characterised in that said standards (1) of the shop rack are hooked together by means of back panels (3) which are locked with respect to the standards (1), in particular by means of screws (14, 17), before jacking up the shop rack. 35

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