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(54) **REFILLING CONTAINER FOR GOODS**

NACHFÜLLVORRICHTUNG FÜR EINEN WARENBEHÄLTER

CONTENEUR DE REMPLISSAGE POUR PRODUITS

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Description

Technical Field

[0001] The present invention relates to the area of exposure of commodities in shop sections consisting of vertically piled containers containing the commodities. Preferably, the invention relates to shop sections consisting of a row of vertically piled containers for self-service and especially for the refilling of such containers.

Background of the Invention

[0002] Confectionery and other sweets for self-service are usually exposed in shops by being visibly well placed in transparent containers, each kind in this way being exposed in an own container. The containers are piled on each other in a rack, which enables that each container may be lifted out from the rack when refilling should be effected. With the number of sorts of sweets that exist, it may be found that entire walls in a shop are provided with such containers. Thus, the number may amount to 200 containers or more in a shop. For refilling, it is required that each container separately is lifted out from the rack and is refilled, and then the container is put back on the location thereof. It is easy to realize the problems that reside in the work and the time-consumption associated thereby, being required for the refilling of the containers. The personnel that performs the refilling fetches packs with the respective sort of sweets from a stockroom somewhere in connection with the shop, and then transports the packs to the self-service place and, according to the above, carries out the refilling there.

[0003] In, for instance, figure 1 in the patent specification GB 2322794 is seen how individual containers for sweets are piled in order to expose different types of sweets for customers and the difficulties that are associated with refilling commodities in the containers. The refilling is carried out by an exposure front being lowered outwards and then refilling is carried out by trying to get in new commodities in the container from a refilling pack when, at the same time, the lowered exposure front is in the way.

Object of the Invention

[0004] The object of the present invention is to solve the above-mentioned problems by providing a refilling device that may be handled considerably simpler at refilling from behind of containers in a shop module.

[0005] An additional object is to shorten the time-consumption that is required in order to refill a container of a previously known type.

[0006] Furthermore, the object is to provide a refilling device that enables a considerably better control over the refilling than previously.

Summary of the Invention

[0007] By the present invention, as this stands out in the independent claim, the above-mentioned objects are met, said disadvantages having been eliminated. Suitable embodiments of the invention are given in the dependent claims.

[0008] A shop section is built up by separate shop modules, which are made having a width of 30 cm and joined to a shop section of optional size. Each shop module is formed in order to, in the latitudinal direction, contain a container having an entire width or two containers having a half width. In the vertical direction in the module, three or four containers are piled. In order to enable a manoeuvre of an entire shop module, each shop module is provided with some form of motion devices enabling that the module may be manoeuvred in order to enable access from the back side of the containers for refilling. For instance, the module with three or four containers thereof may be drawn out irrespective of all other shop modules. The possibility to pull out contributes to the fact that a refilling from behind of the separate containers can be made in a smooth way. Further, the module is provided with inclined planes for commodities at refilling, by the dead load thereof, moving down towards the respective container.

[0009] The container is arranged to be refilled from the back side thereof through a commodity opening. The refilling device is formed as a vessel having an open side connected to the commodity opening of the container via a hinge, which consists, for instance, of a pin joint. The vessel is by the hinge arranged to be angled out sidewards from the container in order to facilitate refilling of commodities. Further, the vessel is provided with a lid that either is opened manually when the vessel is in the angled-out position or is opened up automatically when the vessel is angled outwards.

[0010] Even if the subsequent disclosed embodiments of the invention have been concentrated on loose sweets, the invention is also applicable to other types of bulk commodities that are suitable to constitute self-service commodities in shop premises. In this connection, the bulk commodities may be placed either in transparent containers or covered containers with an exposure module connected to the container.

Brief Description of the Drawings

[0011] The invention will now be closer described by means of embodiment examples, reference being made to the accompanying drawing figures, where

Figure 1 shows a pulled-out shop module in a shop section with refilling possibility from the back side of the section according to the invention.

Figure 2 shows a first embodiment of a refilling device according to the invention.

Figure 3 shows a refilling device in angled-out posi-

tion according to a second embodiment of the invention.

Description of the Invention

[0012] Figure 1 shows a shop section 1 built up by separate shop modules 2 mounted side by side along a wall in a shop premises. The figure also shows a shop module 3 pulled-out from the shop section. At the pulled-out shop module 3, a person 4 is about to refill the containers 5 positioned in the shop module. In doing so, the person 4 has fetched a refilling pack 6 from either a stockroom in connection with the shop or from an intermediate storage 7 behind the respective container 5 in the shop module. The refilling packs in the intermediate storage are placed on a leaning storage plate 8 which is provided with a stop edge 9 in order to avoid that the refilling packs slide downwards on the leaning storage plate 8. The storage plate 8 is connected to the rear edge of the container 5 and intended to contain one or more refilling containers 6 in order to constitute an intermediate storage station in the module.

[0013] The containers 5 that are shown in the figure are made with an exposure front 11 as well as a pick part 12. The pick part 12 is provided with a flap 13 foldable upwards, which is opened by the customer for picking of the commodities. As also is indicated in the figure, each container is divided into two separate containers 16, 17. In this connection, the width of each shop module amounts to approx. 30 cm, which width either may be made up of one container of approx. 30 cm or be made up of two containers that consequently has a width of approx. 15 cm each. In this connection, embodiments with containers of other width combinations may also be feasible, such as 20/10 cm or 25/5 cm. Thus, this shop module gives means for a person to refill the respective container sometimes from one of the sides in pulled-out position and sometimes from the other side in pulled-out position. As also is seen in the figure, each shop section is limited by a side member 18 which covers the entire side of the shop section 1 from exposure from the side.

[0014] Figure 2 shows also that all containers 5 in a module 2 are mounted in a frame 20 as well as each container 5 furthermore resting on an inclined storage plate 8. Further, the frame 20 is provided with motion devices 10 (see fig. 1) intended to enable the frame 20 with all the containers 5 thereof to be displaced transversally forwards from the normal position thereof in the shop section 1 and returned backwards, respectively, to the normal position thereof, in order to enable, in the advanced position, refilling of the commodities from the back side of the containers 5, which is clearly seen in figure 1. Figure 2 shows a refilling device according to a first embodiment of the invention, which device is formed as a vessel 30 that is provided with an open side 31 connected to a commodity opening 32 in the back side of the container via a hinge 33 having the form of a pin joint. The vessel is, in this connection, arranged to be angled out sidewards around the shaft 33' of the pin joint from the container in order to facilitate refilling of commodities. The vessel 30 is also provided with a lid 34 that either is arranged to be opened manually when the vessel is in the angled-out position or is arranged to be opened automatically when the vessel is angled outwards. As figure 2 also shows, the back side of the container is provided with the storage plate 8 leaning upwards against which the vessel 30 rests and also slides outwards at the angling thereof. Immediately above the vessel, the storage plate lying above is connected to the container thereof, a space 35 being formed between the storage plates. Thus, in this space, the vessels for refilling are placed. Further, in order to eliminate waste of commodity when the vessel is angled outwards, the vessel is provided with overlapping limiting surfaces 36 (only indicated by the arrow 36) at the open side thereof that is turned to the commodity opening 32 of the container.

[0015] Figure 3 shows a second embodiment of a pulled-out shop module 3 having a refilling vessel 30 according to the invention. The container 5 is together with the exposure front 11 thereof mounted in the frame 20. The refilling vessel 30 is, as in the first embodiment, connected to the commodity opening 32 in the back side of the container 5. Behind each container mounted in the frame, the vessel 30 is shown in an angled-out position, an angular motion having taken place around the pin joint 33. At this motion, the lid 34 has been angled up and is now in the vessels outer position entirely open. The figure also shows the leaning storage plate 8 with the stop edge 9 thereof.

[0016] At refilling of commodities, the refilling pack 6 is opened, the commodities being emptied directly into the vessel 30 that subsequently is folded in, the lid 34 being shut. In the figures 2 and 3 is seen that two containers are placed on the module width, each one having a refilling vessel connected to the back side of the container for the refilling of commodities. It is also possible to let two vessels for the refilling lead commodities down into the same container.

Claims

1. Refilling device for a container (5) intended for bulk commodities, which container (5) is mounted above or below other containers that are included as a module (3) in a shop section (1), **characterized in that** the container (5) is arranged to be refilled through a commodity opening (32) in the back side thereof, the refilling device being formed as a vessel (30) having one side open that is connected to the commodity opening (32) in the back side of the container (5) via a hinge (33), the vessel (30) being arranged to be angled out sidewards from the container (5) in order to facilitate refilling of commodities.

2. Refilling device according to claim 1, **characterized**

in that the vessel (30) is provided with a lid (34) that either is arranged to be opened manually when the vessel (30) is in an angled-out position or is arranged to be opened automatically when the vessel (30) is angled outwards.

3. Refilling device according to claim 2, **characterized in that** the vessel (30) at the open side thereof has limiting surfaces (36) overlapping with the commodity opening of the container in order to eliminate waste of commodity when the vessel (30) is angled outwards.

4. Refilling device according to claim 3, **characterized in that** the back side of the container (5) is provided with a storage plate (8) leaning upwards against which the vessel (30) rests and also slides at the angling outwards thereof.

5. Refilling device according to any one of claims 1-4, **characterized in that** a plurality of containers (5) are mounted in the vertical direction on top of each other, each container (5) being provided with a flap (13) for access of the commodities, that all containers (5) are mounted in a frame (20) that is provided with motion devices (10) intended to enable the frame (20) with the containers (5) thereof to be displaced transversally forwards from the normal position thereof in the shop section (1) and returned backwards, respectively, to the normal position thereof in order to enable, in the advanced position, refilling of the commodities from the back side of the containers (5).

Patentansprüche

1. Nach- oder Auffüllvorrichtung für einen Behälter (5), welcher für Schüttware ausgelegt ist, wobei der Behälter (5) oberhalb oder unterhalb anderer Behälter angebracht ist, welche als Modul (3) in einer Ladenabteilung (1) vorgesehen sind, **dadurch gekennzeichnet, dass** der Behälter (5) derart angeordnet ist, dass er durch eine Warenöffnung (32) an seiner Rückseite aufgefüllt werden kann, wobei die Nach- oder Auffüllvorrichtung als Gefäß (30) mit einer offenen Seite ausgebildet ist, welches mit der Warenöffnung (32) in der Rückseite des Behälters (5) durch ein Scharnier (33) verbunden ist, wobei das Gefäß (30) derart angeordnet ist, dass es von dem Behälter (5) seitlich nach außen gewinkelt ist, um das Nachfüllen von Ware zu erleichtern.

2. Nach- oder Auffüllvorrichtung nach Anspruch 1, **dadurch gekennzeichnet, dass** das Gefäß (30) mit einem Deckel (34) versehen ist, welcher entweder so angeordnet ist, dass er manuell geöffnet wird, wenn sich das Gefäß (30) in einer nach außen gewinkelten Position befindet, oder so angeordnet ist, dass er automatisch geöffnet wird, wenn das Gefäß (30) nach außen gewinkelt ist.

3. Nach- oder Auffüllvorrichtung nach Anspruch 2, **dadurch gekennzeichnet, dass** das Gefäß (30) an seiner offenen Seite Begrenzungsflächen (36) aufweist, die sich mit der Warenöffnung des Behälters überlappen, um Verlust oder Verschwendung von Ware zu verhindern, wenn das Gefäß (30) nach außen gewinkelt ist.

4. Nach- oder Auffüllvorrichtung nach Anspruch 3, **dadurch gekennzeichnet, dass** die Rückseite des Behälters (5) eine sich nach oben neigende Auflageplatte (8) aufweist, auf welche sich das Gefäß (30) stützt und an dessen Angeln es zudem nach außen gleitet.

5. Nach- oder Auffüllvorrichtung nach einem der Ansprüche 1 bis 4, **dadurch gekennzeichnet, dass** eine Vielzahl von Behältern (5) in senkrechter Richtung aufeinander angebracht ist, wobei jeder Behälter (5) eine Verschlussklappe (13) für einen Zugriff auf die Ware aufweist, dass alle Behälter (5) in einem Gestell (20) befestigt sind, das Bewegungsvorrichtungen (10) aufweist, die dazu ausgelegt sind, die Verlagerung des Gestells (20) mit dessen Behältern (5) von seiner Normalposition in der Ladenabteilung (1) diagonal nach vorne bzw. die Rückkehr in dessen Normalposition zu ermöglichen, um ein Nach- oder Auffüllen der Ware von der Rückseite des Behälters (5) aus in vorgerückter oder vorverlagerten Position zu ermöglichen.

Revendications

1. Dispositif de remplissage pour un conteneur (5) destiné à des denrées en vrac, lequel conteneur (5) est monté au-dessus ou en dessous d'autres conteneurs qui sont intégrés en tant que module (3) dans une section de magasin (1), **caractérisé en ce que** le conteneur (5) est disposé de façon à être rempli à travers une ouverture pour denrées (32) sur sa face arrière, le dispositif de remplissage étant formé en tant que récipient (30) présentant un côté ouvert qui est relié à l'ouverture pour denrées (32) sur la face arrière du conteneur (5) par le biais d'une charnière (33), le récipient (30) étant disposé de façon à être incliné vers les côtés du conteneur (5) afin de faciliter le remplissage des denrées.

2. Dispositif de remplissage selon la revendication 1, **caractérisé en ce que** le récipient (30) est pourvu d'un couvercle (34) qui est disposé, soit de façon à être ouvert manuellement lorsque le récipient (30) est dans une position inclinée, soit de façon à être

ouvert automatiquement lorsque le récipient (30) est incliné vers l'extérieur.

3. Dispositif de remplissage selon la revendication 2, **caractérisé en ce que** le récipient (30) présente, sur son côté ouvert, des surfaces limites (36) chevauchant l'ouverture pour denrées du conteneur afin d'éviter la perte de denrées lorsque le récipient (30) est incliné vers l'extérieur.

4. Dispositif de remplissage selon la revendication 3, **caractérisé en ce que** la face arrière du conteneur (5) est pourvue d'une plaque de stockage (8) s'étendant vers le haut, contre laquelle le récipient (30) repose et coulisse en suivant son inclinaison vers l'extérieur.

5. Dispositif de remplissage selon l'une quelconque des revendications 1 à 4, **caractérisé en ce qu'**une pluralité de conteneurs (5) sont montés dans le sens vertical les uns par-dessus les autres, chaque conteneur (5) étant pourvu d'une trappe (13) pour donner accès aux denrées, **en ce que** tous les conteneurs (5) sont montés dans un châssis (20) qui est pourvu de dispositifs de mouvement (10) destinés à permettre au châssis (20) et à ses conteneurs (5) d'être déplacés de manière transversale vers l'avant à partir de leur position normale dans la section de magasin (1) et d'être ramenés vers l'arrière, respectivement, dans leur position normale afin de permettre, dans la position avancée, le remplissage des denrées depuis la face arrière des conteneurs (5).

Fig. 1

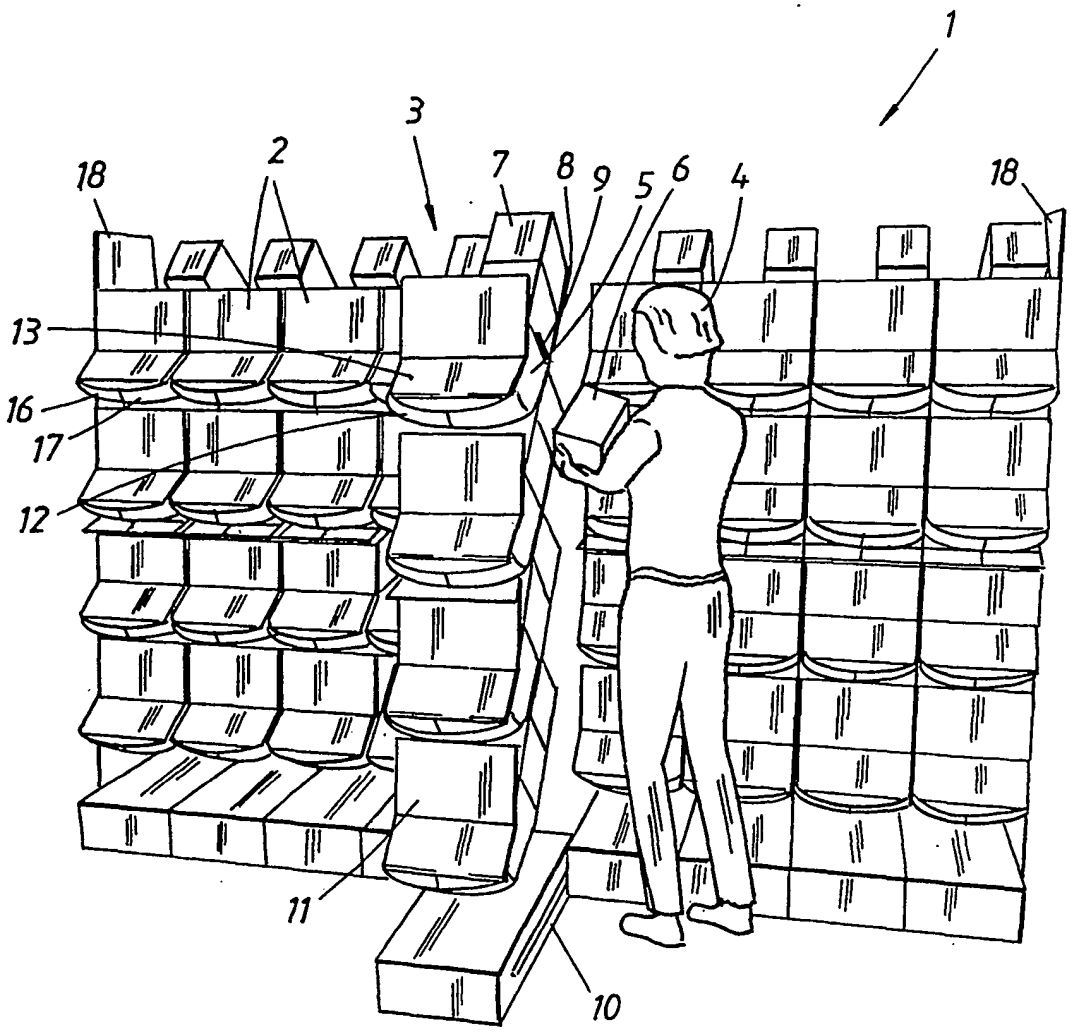

Fig. 2

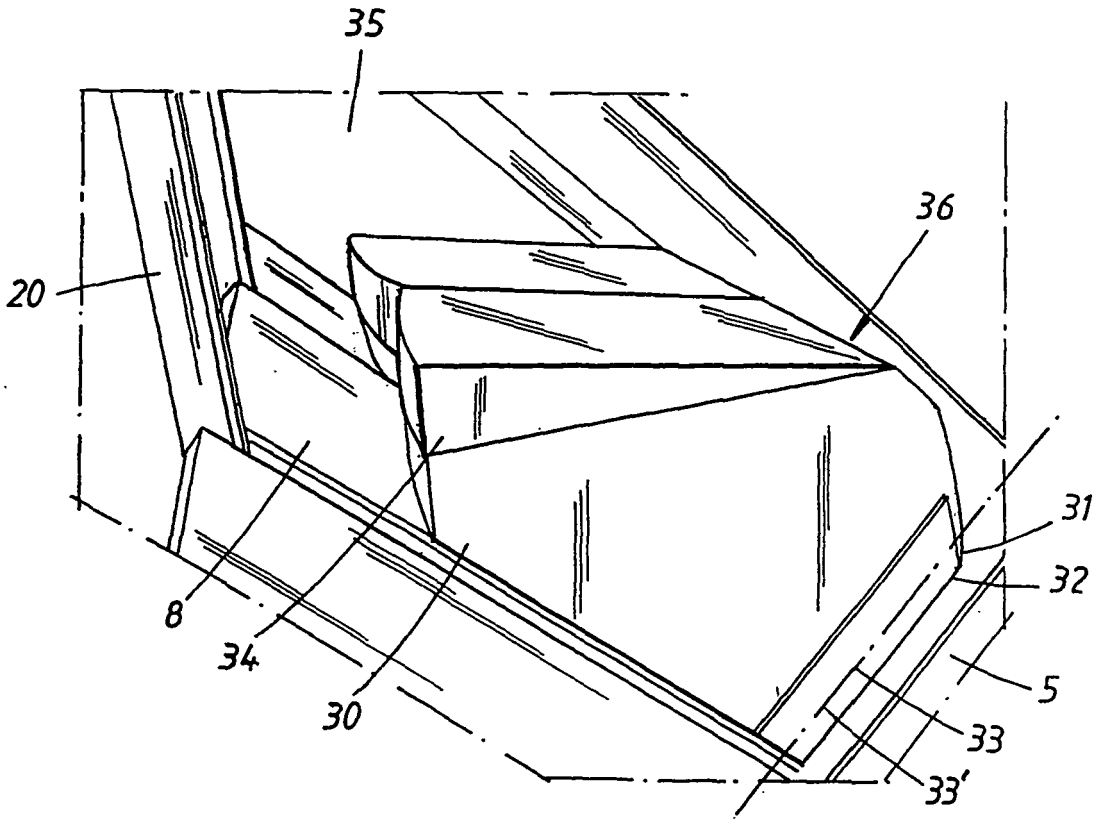
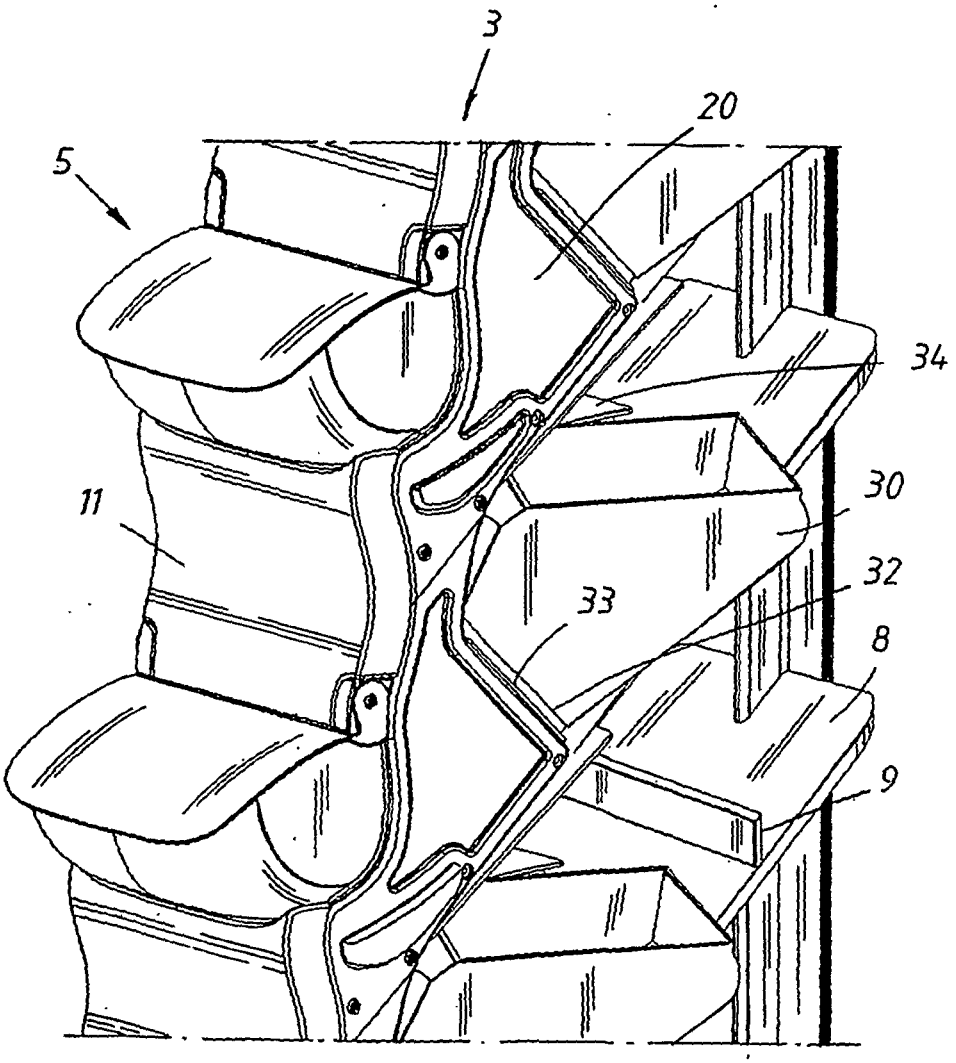
Fig.3