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(54) **ARRANGEMENT IN PACKING BAGS**

EINRICHTUNG ZUM FÜLLEN VON TÜTEN

SYSTEME DE REMPLISSAGE DE SACS

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(56) References cited:
NO-B- 155 223 **SE-B- 406 307**

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Description

The present invention relates to an arrangement for taking bags singly from a flat block of bags and opening said bag to enable articles to be placed therein, said arrangement including bag gripping means and said bags being held in the block by means of perforated tear-lines on respective bags.

Arrangements of this kind are known to the art and include two hooks on which the block of bags is hung, the upper part of the block having two holes through which the hooks can be passed. When a bag is to be used, the uppermost bag or first bag in the block is torn along the tear-line and opened on one side of the block and articles are placed in the bag. In this respect, it is necessary to hold the bag either with two hands or with one hand, therewith making it difficult in this latter case to hold the bag open wide enough for the articles to be placed in the bag with the other hand. When the bags contained in the block are made of thin material, it is also difficult to grip one bag at a time from the underlying block. When the block of bags lies on a flat supporting surface and is thus not supported by any form of attachment, further difficulties are encountered in loosening one bag at a time from the block and in holding the bag open so that one or several articles can be placed therein.

It is also known, see NO-B-155 223 and SE-B-406 307, to hang up a bundle of bags on a hook means, which is passed through the handle openings of said bags. The bags are however not held in a block through perforated tear-lines on respective bags.

The object of the present invention is to provide an arrangement which will enable the bags to be held open with one hand and therewith leave the other hand free to place articles into the bag. In this regard, the bags shall be supported or fastened by a block attachment means so that, e.g., the weight of the articles will not subject the hand which holds the bag open to the weight of the articles as they are placed into the bag. After having placed the articles in the bag, it shall be a simple matter to release the bag from the block attachment means, and carry away the bag.

So as to provide the aforesaid advantages and to solve the aforesaid problems, the inventive arrangement has been given the characteristic features set forth in the following claims. An exemplifying embodiment of the invention will now be described with reference to the accompanying drawings, in which Figure 1 illustrates a block attachment means which grips a block of bags, as seen obliquely from above; and

Figure 2 illustrates the block of bags obliquely from above and from the other direction.

Figure 1 illustrates a block or stack 1 of flat bags. The block is secured between an upper bar 2 and a lower bar 3. The bars are held together by means of suitable fasteners, for instance by two screws 4 and 5 or corresponding fastener devices. It is important that the screws or fasteners do not project above the upper or

outer side of the outermost or uppermost bar 2, since parts which project beyond the outer surface of the bar 2 will prevent articles from being placed in the open bag. The bags forming the block are held at the upper edge of the block through the agency of perforated tear-lines, by means of which the bags can be torn from the block. A perforated bag tear-line is indicated by the broken line 6, which extends transversely over the whole of the upper edge of the bag. Each side of the bags has a respective handgrip opening 7 and 8. The bags preferably hang secured in the block solely by means of a perforated tear-line in the lower or second side of the two sides of the flat bag. This means that the uppermost or outermost side of each bag in the block is free to be lifted away from the block without needing to tear-off the bag. Thus, solely the handgrip opening in the uppermost bag is gripped and the uppermost side of the bag lifted away from the lower side thereof.

Figures 1 and 2 also illustrate how the front side 9 of the uppermost bag in the block is lifted away from the underlying side of said bag, this underlying side being indicated by the handgrip opening 8. The front side 9 of the bag has a handgrip opening 7 and the upper, or front, side of the bag is lifted away from the underlying bag side by gripping the handgrip opening 7. This lifting movement will tear the bag along the perforated tear-line 6, therewith also loosening the underside of the bag from the block. In order to prevent the underside side of the bag being completely torn-off along the perforated tear-line as the front side of the bag is lifted from the block, two hook devices 10 and 11 are provided on the upper bar 2. The hook devices 10 and 11 thus project downwards into the bag opening created when lifting the front side of the bag upwards or forwards away from the underlying bag side. The hook devices 10 and 11 are conveniently configured so that the hooked shape is oppositely turned, i.e. turned outwards towards the longitudinally extending edges or side edges 12 of the bags, whereby the bag opening is gripped by the hook devices at two mutually opposite points 13 and 14 of the bag opening. Thus, Figure 1 illustrates the raised longitudinal edges of a bag at 15 and 16, and the raised side of the bag that contains the handgrip opening 7. The other side of the raised, or opened bag remains flat against the block, the upper side of the underlying bag being illustrated by the handgrip opening 8, as before-mentioned. The bag opening in this state of the bag can be said to have a triangular configuration defined by the broken lines 17, 18, 19. Two corners are supported by the hook devices 10 and 11, while the third corner is supported by the hand that grips the opening 7.

The hook devices 10 and 11 lie in the same plane as the bar 2, and thus in a plane which is parallel with the flat state of the bags. The hook devices automatically engage the edge of the bag opening as the front or upper side of the bag is first lifted slightly downwards and then upwards in conjunction with tearing the bag along the perforated tear-lines 6, beginning from the side edges 12 and continuing inwards. The hook

devices may optionally be provided with friction enhancing means, such as serrations or the like, so that said devices will grip against the inner surface of the bag more positively and thus fixate the upper edge of the bag more definitely, i.e. that edge which extends around the bag opening.

The block of bags may suitably be suspended by means of the two bars so that the bags will hang vertically downwards, wherein the bottom bar 3 is conveniently attached, for instance, to a perpendicularly positioned plate (not shown). The plate may have an outwardly projecting flange or bottom in the position where the bottoms of the bags are placed, said plate then functioning to support the bags as articles are placed thereinto. It is also suitable to fixate the bottom bar 3, or at least enable the bottom bar to be fixed to some form of supporting surface, even when the arrangement is used with the bags lying against a supportive surface, so that the block of bags will remain stationary when opening the uppermost bag and placing articles thereinto. The configuration of the bars 2 and 3 can be varied, the essential criterion being that together they hold the block of bags firmly therebetween. The perforated tear-lines 6 extending along the upper edges of respective bags are preferably spaced from the bars 2 and 3. It may also be appropriate to adapt the tear-strength of the perforations, so that the bag will not be torn too easily along said tear lines as the front side of the upper bag is lifted, so that the hook devices 10 and 11 will prevent further tearing along the perforated tear-line along the bottom side of the bag. Thus, tearing of the bag along the perforated tear-line between the hook devices 10 and 11 shall be prevented until the bag has been filled, whereafter the bag can be released by gently pulling the bag downwards. The manner in which the bars 2 and 3 are joined together may also be varied. For instance, the bars may be joined together by hinge means, thereby enabling the bars to be folded together around said hinge and therewith firmly clamp the block of bags. However, the block will preferably be securely held with the aid of screws 4 and 5 or pins inserted through the bars and holes in the block of bags. The bars 2 and 3 may also be comprised of thin plates and the bottom bar 3 may then have the form of a full-size plate which extends along the full length of bags and thus downwards in Figure 1. The essential criterion is that strip-like parts, referenced 2 and 3 in the drawings, are provided which firmly clamp the block of bags.

Claims

1. An arrangement for taking bags singly from a block of flat bags and opening said bag to enable articles to be placed thereinto, said arrangement including bag gripping means, and said bags being held in the block through perforated tear-lines (6) on respective bags, **characterized** in that the bag gripping means includes two mutually parallel strip-like parts (2, 3) between which the block (1) is placed in

a manner to enable the bags to be torn from the block one at a time; in that the forward edges of the bags lie free from the nearest lying strip-like part (2), said part (2) having two downwardly extending hooks (10, 11) which project out slightly above the front side (9) of the uppermost or outermost bag and which are spaced a given distance apart so as to engage the circumferentially extending opening edge (17, 18, 19) of said uppermost or outermost bag from within as the front edge (17, 18) of said uppermost or outermost bag is lifted over the hooks (10, 11) and held outwardly stretched from the plane of said uppermost or outermost bag.

2. An arrangement according to claim 1, **characterized** in that the hooks (10, 11) lie in the plane of the strip-like part (2); and in that the hooked shape is turned outwardly towards the side edges (12) of the flat bags.
3. An arrangement according to claim 1, **characterized** in that the strip-like parts (2,3) are comprised of two mutually releasable bars which firmly grip the block (1) of bags therebetween at a position located above the perforated bag tear-lines, said bars being held together by means of fastener devices (4, 5) which extend essentially from the front surface of the most forward bar (2) and through the rear bar (3).
4. An arrangement according to any one of the preceding claims, **characterized** in that the strip-like parts (2, 3) can be mounted on a side support for the block of flat bags.

Patentansprüche

1. Einrichtung zur Einzelabnahme von Tüten von einem Block aus flachen Tüten und zum Öffnen der Tüte, um Gegenstände darin anordnen zu können, wobei die Einrichtung Tüteneinspannmittel aufweist und die Tüten jeweils über eine perforierte Reißlinie (6) in dem Block gehalten werden, dadurch gekennzeichnet, daß das Tüteneinspannmittel zwei zueinander parallele streifenartige Teile (2, 3) aufweist, zwischen denen der Block (1) so angeordnet ist, daß die Tüten einzeln von dem Block abgerissen werden können; daß die vorderen Ränder der Tüten von dem zunächstliegenden streifenartigen Teil (2) freiliegen, wobei dieser Teil (2) zwei nach unten ragende Haken (10, 11) aufweist, die sich etwas über die Vorderseite (9) der obersten oder äußersten Tüte erstrecken und einen vorbestimmten Abstand haben, so daß sie an dem sich in Umfangsrichtung erstreckenden Öffnungsrand (17, 18, 19) der obersten oder äußersten Tüte von innen anliegen, wenn der vordere Rand (17, 18) der obersten oder äußersten Tüte über die Haken (10, 11) angehoben und von der Ebene der obersten oder

äußersten Tüte weg nach außen gestreckt gehalten wird.

2. Einrichtung nach Anspruch 1, dadurch gekennzeichnet, daß die Haken (10, 11) in der Ebene des streifenartigen Teils (2) liegen, und daß die Hakenform nach außen in Richtung auf die Seitenränder (12) der flachen Tüten gekehrt ist. 5
3. Einrichtung nach Anspruch 1, dadurch gekennzeichnet, daß die streifenartigen Teile (2, 3) zwei voneinander trennbare Schienen aufweisen, die den Block (1) aus Tüten fest zwischen sich an einer Stelle einklemmen, die oberhalb der perforierten Tütenreißlinien liegt, wobei die Schienen durch Verbindungsmittel (4, 5) zusammengehalten werden, die sich von der Vorderseite der vordersten Schiene (2) und durch die hintere Schiene (3) erstrecken. 10 15
4. Einrichtung nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß die streifenartigen Teile (2, 3) an einem seitlichen Träger für den Block aus flachen Tüten montierbar sind. 20

Revendications 25

1. Système pour prendre des sacs isolément à partir d'un bloc de sacs plats et ouvrir ledit sac pour permettre d'y introduire des articles, ledit système comportant des moyens de serrage de sac, et lesdits sacs étant retenus dans le bloc au moyen de lignes de déchirure perforées (6) sur les sacs respectifs, caractérisé en ce que les moyens de serrage de sac comprennent deux pièces en forme de bandes (2, 3) mutuellement parallèles entre lesquelles est disposé le bloc (1) d'une manière qui permet aux sacs d'être déchirés du bloc un à la fois ; en ce que les bords avant des sacs sont dégagés de la pièce en forme de bande (2) se trouvant le plus près, ladite pièce (2) présentant deux crochets (10, 11) disposés vers le bas qui dépassent légèrement au-dessus de la face avant (9) du sac le plus haut placé ou le plus à l'extérieur et qui sont espacés d'une distance donnée l'un de l'autre de façon à rencontrer le bord d'ouverture s'étendant circumférentiellement (17, 18, 19) dudit sac le plus haut ou le plus extérieur de l'intérieur quand le bord avant (17, 18) dudit sac le plus haut ou le plus extérieur est levé au-dessus des crochets (10, 11) et maintenu tendu vers l'extérieur à partir du plan dudit sac le plus haut ou le plus extérieur. 30 35 40 45 50
2. Système selon la revendication 1, caractérisé en ce que les crochets (10, 11) se trouvent dans le plan de la pièce en forme de bande (2) ; et en ce que la forme en crochet est tournée vers l'extérieur en direction des bords latéraux (12) des sacs plats. 55
3. Système selon la revendication 1, caractérisé en ce

que les pièces en forme de bande (2, 3) consistent en deux barres mutuellement libérables qui serrent fermement le bloc (1) de sacs entre elles à un endroit situé au-dessus des lignes de déchirure perforées, lesdites barres étant maintenues ensemble au moyen de dispositifs de fixation (4, 5) qui s'étendent essentiellement à partir de la surface avant de la barre située en avant (2) et à travers la barre arrière (3).

4. Système selon l'une quelconque des revendications précédentes, caractérisé en ce que les pièces en forme de bandes (2, 3) peuvent être montées sur un support latéral pour le bloc de sacs plats.

Fig.1

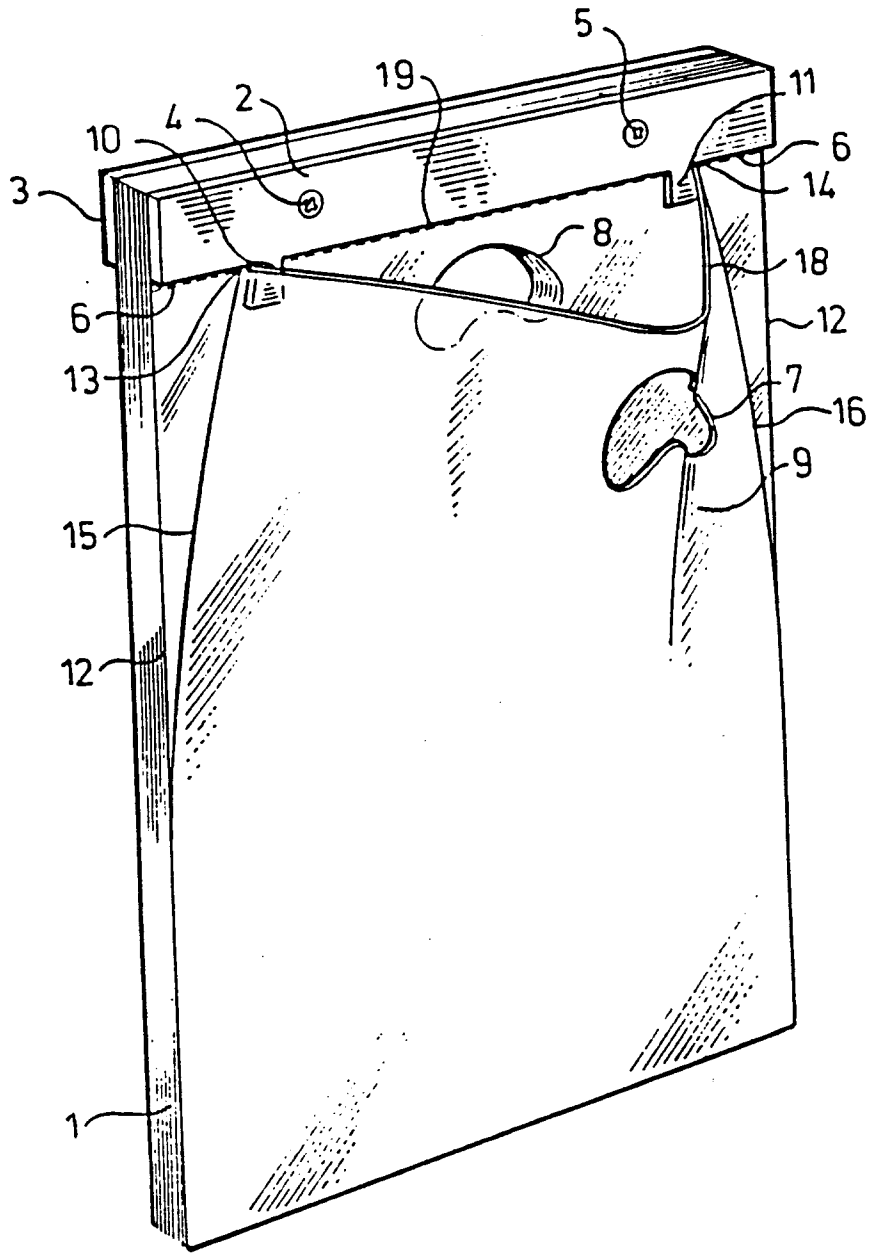


Fig. 2

