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(54) **METHOD AND APPARATUS FOR GUIDING A WEB FOR PACKAGE BLANKS**

VERFAHREN UND VORRICHTUNG ZUR FÜHRUNG EINER BAHN FÜR PACKUNGSZUSCHNITTE

PROCEDE ET APPAREIL DE GUIDAGE D'UNE BANDE SERVANT A PRODUIRE DES BLANCS D'EMBALLAGES

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Description

[0001] The present invention relates to a method and an apparatus for guiding a web for package blanks of flexible material which is fed to a filling station at which individual open packaging blanks are filled, said web preferably being sequentially fed to the filling station so that filling of the blanks takes place in a time interval formed between the feeding occasions, and the web being fed from a container, for example a carton, containing a predetermined quantity of packaging blanks, each blank displaying a first wall, a second wall opposed to the first wall, longitudinal first and second edges, and a bottom portion at said first edge, and further also two transverse connecting zones in relation to the longitudinal direction of the web, the zones forming the first and second side seals of the blank, where the web includes slots which are disposed transversely in relation to the direction of transport of the web and which are disposed between the connecting zones to two mutually adjacent packaging blanks, whose respective walls have two opposing edge portions which extend in the longitudinal direction of the web at its second edge, each one including a continuous retainer member which each co-operates with mechanical means for guiding the edge portions when the web is displaced through the filling station, longitudinal slots being disposed on either side of the transverse slots between the blanks and the retainer members.

[0002] Document WO-A-9425365 describes such a method and apparatus.

[0003] The feeding of webs of packaging blanks of this type, both continuous and sequential, can, when the production rate is high and the web, which is collected from a magazine, for example a carton, is not arranged so that, on discharge out of the magazine, it always leaves the magazine arranged in a given manner, under unfavourable conditions, result in the web becoming entangled which in turn may result in undesirable operational stoppage. This is naturally unsatisfactory, for which reason one object of the present invention is to realise a method and an apparatus for guiding a web of packaging blanks according to which the retainer members, in connection with the sequential feeding steps, are moved into slots in a guide member which are located transversely in relation to the filling station, the retainer members being parted at distance so that the packaging blank in question is opened to a certain extent up to its maximum opening width, at the same time as the retainer members are rotated through an angle amounting to between 60 and 120° clockwise and counterclockwise, respectively, in relation to the vertical plane so that the retainer members and the portion of the packaging blanks disposed adjacent are forced to assume a substantially horizontal orientation, whereafter all blanks are oriented depending substantially vertically, and web entanglement may thus be avoided.

[0004] As a result of the utilisation of roller means for guiding and retaining the packaging blanks in the slots, a completely reliable, safe and unmonitored operation will be attained as regards the infeed section of a filling table. The provision of two opposing balls, possibly pairwise in sequence, further increases operational reliability.

[0005] The specific design of the apparatus according to the present invention makes for an immediate disentanglement of a web which may possibly have become entangled upstream of the apparatus. The gap which is formed between the balls is slightly larger than the wall thickness of the web but less than the thickness of the thickened portions, for which reason the web may be removed and inserted without problem, at the same time as retention will be optimal. The elasticity and resilient properties of the thickened portions to reassume their size after compression entail that the thickened portions may be pressed between the balls.

[0006] The present invention will now be described in greater detail hereinbelow, with reference to one embodiment shown on the accompanying drawings, where:

Fig. 1a is a partial perspective view of a portion of a packaging blank web for application of the method and the apparatus according to the present invention;
Fig. 1b is a cross section taken along the line b-b in Fig. 1a;
Fig. 2 shows an apparatus according to the present invention with a blank web applied therein;
Fig. 3a shows an apparatus according to the present invention in perspective;
Fig. 3b shows the apparatus according to Fig. 3a in side elevation;
Fig. 3c shows the apparatus in front elevation;
Fig. 4 is a top plane view of the apparatus according to the present invention;
Fig. 4a shows the apparatus in cross section taken along the line A-A in Fig. 4; and
Fig. 4b shows the apparatus in cross section taken along the line B-B in Fig. 4.

[0007] Fig. 1a shows one embodiment of a packaging blank web 1 in side elevation and partial in perspective. The web 1 comprises a continuous sequence of blanks 2 which each have a first wall 3, a second wall 4 which is in opposition to the first wall 3, longitudinal first and second edges 5, 6, as well as a bottom portion at said first edge 5. In respect of the longitudinal direction of the web 1, there are provided transverse connecting zones 8, 9, which form first and second side seals 10, 11 of the blank 1. Between the respective side seals of each blank 2, there are disposed slots 12 which are transverse in respect of the direction of transport of the web (the same direction as that in which the blanks 2 are disposed), and which are located between the connecting zones 8, 9 to two mutual adjacent packaging blanks 2. Each re-

spective wall 3, 4 thereto has two opposing edge portions 15, 16 which extend in the longitudinal direction of the web 1 at its second edge 6, each one of these portions including a continuous retainer member 17 and 18, respectively. The retainer members are intended to cooperate with mechanical means (not shown) for guiding the edge portions 15, 16 when the web 1 is displaced through a subsequently disposed filling station (not shown) intended for filling of the blanks. The blank web 1 moreover includes longitudinal slots 21, 22 which are disposed on either side of the transverse slots 12, between the blanks 1 and the retainer members 17, 18.

[0008] Fig. 1b shows a cross section which is taken along the line b-b in Fig. 1. Fig. 2 is intended to clarify the appearance of the packaging blank in cross section, with walls 3, 4, opposing edge portions 15, 16, and retainer members 17, 18.

[0009] Fig. 2 is a view of the apparatus according to the present invention in the form of guide means 24 with a packaging blank web 1 inserted therein and moveable through the plane of the drawing paper. The guide means 24 is provided, along the left and right sides in Fig. 2, respectively, grooves or slots 23 through which retainer members 17,18 disposed at each upper opposing edge of the packaging blank web 1 may run either continuously or sequentially, depending upon type of operation. The configuration of the guide means 24 may simply be described as corresponding to a hockey puck with a frustoconical form superposed thereon. The slots 23 are disposed in the puck-like portion. In the outer portion of each slot 23, there are provided roller means 25 which are intended, both in the stationary state and during displacement, to retain the retainer members 17, 18 in each respective slot 23.

[0010] Fig. 3a shows the guide means 24 seen as a perspective view slightly obliquely from above. In addition to that said in the foregoing, it will be apparent from this figure only that the guide means 24 encompass, on either side in association with the slots 23, recesses 26 from the upper side of the means 24 to its lower side.

[0011] Fig. 3b shows the guide means 24 seen from its one side, and it will be apparent in this instance that the slot includes two sets of two balls 25 each, one set on each side of each respective recess 26. The slots 23 are identical and display the same ball set on each respective side of the guide means 24. It will also be apparent from this figure that the recess has a hole 27 disposed transversely thereto. The hole is intended for securing the guide means 24 on a rod (not shown) suitable for this purpose. Transversely in relation to the hole 27, there is an additional hole 28 which is intended for a fixing bolt (not shown), which permits fixing of the guide means 24 in relation to its surroundings.

[0012] Fig. 3c shows a view of the guide means 24 from above. Particular attention should here be paid to the recesses 25, since they are particularly clearly apparent.

[0013] Fig. 4 finally shows the guide means 24 from beneath. As from Fig. 3c, the recesses 26 are clearly apparent. Similarly, it will be apparent that the hole 28 is through-going. Moreover, there are markings 29 after closed holes 30, which will be described in greater detail with reference to Fig. 4b.

[0014] Fig. 4a shows a central cross section of the guide means 24 and, as was pointed out previously, shows the recesses 25, but better here in relation to other dimensions. Like preceding figures, Fig. 4b shows a cross section, in this case taken along the line B-B. The outer contour of the guide means is clearly apparent, like the slots 23 and the balls 25 disposed in association therewith. The figure also clarifies the holes 30 presented in association earlier with Fig. 4a, the holes being intended to make for insertion of the balls 25 in their respective places in connection with composition of the guide means 24.

[0015] In the method according to the present invention, the packaging blank web 1 is passed or drawn in continuously or intermittently through the substantially horizontally oriented slots 23, the retainer members 17, 18 being retained therein under the action of the roller means 25. The clearance which exists between each respective opposing roller means 25 is of a size that slightly exceeds the thickness of the wall of the blank. Thus, since the retainer members 17, 18 are slightly compressible under positive force, the retainer members can, as needed, be moved into and out of the slots 23, respectively. As a result of the peculiar configuration of the guide means and their slots 23, the packaging blanks, in particular in the most commonly occurring case, i.e. when the blanks arrive twisted around their own line of transport, will without exception be immediately turned correctly without affecting operations whatever. In this instance, the partially frustoconical configuration of the guide means is an essential distinguishing feature.

[0016] Initiation of the method of operation according to the present invention presupposes a manual insertion procedure which, however, is considerably simplified in that the guide means 24 is designed with the above-described recesses 26. With their help, the insertion procedure is facilitated so as only to encompass stretching of a piece of each respective retainer member 17 or 18, whereafter it is sufficient to lightly press the stretched portion against the slot 23 and the recess 26 in association therewith. Naturally, it is correspondingly possible with but limited force, to pull out the retainer members of the packaging blank web 1 from the slot 23 past the roller means 25. As is apparent from Fig. 3b and 4a, the apparatus according to the present invention has a through-going hole 25 which is intended for mounting of the apparatus on an anchorage rod (not shown) in connection with the filling table. Given that the rod (not shown) is, at least in its outer region, disposed at right angles in relation to the line of transport, the guide means can be angled so that the angle which occurs between the magazine container (not shown) and the

guide means 24, and between the guide means and the continued line of transport of the packaging blank web after the guide means 24 will suitably be equal. Operational reliability will further be promoted hereby. As will have been apparent from the foregoing, the guide means may be fixed in a predetermined position under the action of a locking bolt suitable for the purpose.

[0017] As regards the roller means 25, in the illustrated case here in the form of balls, these are disposed in their respective cavities 30 in which they are fixed by means of specific, specially adapted fixing bolts in such a manner that the above-described clearance between the balls is established. After mounting of the balls, the remainder of the cavity 30 is sealed by means of a suitable curing cement.

[0018] It should be observed that the present invention has been described in the foregoing exclusively with reference to one specific embodiment thereof. However, it is obvious that the present invention should not be considered as restricted to this embodiment but only restricted by the appended claims.

Claims

1. A method of guiding a packaging blank web (1) which is fed to a filling station (not shown) at which individual, opened packaging blanks (2) are filled, said web preferably being fed to the filling station sequentially such that filling of the blanks (2) takes place in a time interval formed between the feeding occasions, and the web (1) is fed from a container, for example a carton, containing a predetermined quantity of packaging blanks, each blank (2) displaying a first wall (3), a second wall (4) opposing the first wall, longitudinal first and second edges (5, 6), as well as a bottom portion (7) at said first edge (5), further and also two connecting zones (8, 9) transverse in relation to the longitudinal direction of the web and forming the first and second side seals (10, 11) of the blank (1), where the web includes slots (12) which are transverse in relation to its direction of transport and which are disposed between the connecting zones (8, 9) to two mutually adjacent packaging blanks (2), whose respective wall (3, 4) has two opposing edge portions (15, 16) which extend in the longitudinal direction of the web at its other edge (6), each one including a continuous retainer member (17, 18), which each co-operates with mechanical means for guiding the edge portions (15, 16) when the web (1) is displaced through the filling station, longitudinal slots (21, 22) being disposed on either side of the transverse slots (12) between the blanks (1) and the retainer members (17, 18), **characterised in that** the retainer members (17, 18) are, in connection with the sequential feeding steps, moved into slots (23) located transversely in relation to the filling station, in guide means (24), said retainer members (17, 18) being parted a certain extent up to the maximum opening width of the packaging blank (2) at the same time as said retainer members (17, 18) are turned through an angle amounting to between 60 and 120° clockwise and counterclockwise, respectively, in relation to the vertical plane, so that the retainer members (17, 18) and the adjacent located portion of the packaging blanks (2) are oriented substantially horizontally, whereby all blanks (2) are disposed depending vertically.

2. The method as claimed in claim 1, **characterised in that** said retainer members (17, 18) are, in connection with insertion in the slots (23) turned through an angle amounting to approximately 90° clockwise and counterclockwise, respectively.

3. The method as claimed in claim 1 or 2, **characterised in that** said retainer members (17, 18) in each respective guide means (24) are guided/retained by at least one roller means (25) located in each slot.

4. The method as claimed in any of the preceding claims, **characterised in that** the holder members are guided in a flexible manner into the guide means (24) provided with roller means (25) as a consequence that each respective mouth to said guide means is gently rounded and/or gently curved in configuration.

5. The method as claimed in claim 3 or 4, **characterised in that** said retainer members (17, 18) are guided/retained in each respective slot (23) by two pairs of mutually opposing balls (25).

6. An apparatus for guiding a packaging blank web (1) for avoiding entanglement thereof when the web is transported sequentially from a magazine container to a filling station, the packaging blanks having, along one edge portion (15,16) thereof, longitudinal retainer members (17,18) which are contiguous along the edge portion and unite and, to a limited extent, rigidify said web edge portions, and which by mutual displacement in their longitudinal direction as well as parting in said filling station permits the formation of parallelepipedic apertures in the packages, **characterised in that** it includes guide means (24) with a body which is puck-like in its lower portion and in its upper portion is of frustoconical configuration, where the puck-like portion has transversal slots (23) which are intended for insertion and through passage of the retainer members of the packaging blank web, and said slots (23) being disposed rotated between 60 and 120° in relation to the vertical plane so that, on the through passage of the retainer members, each one thereof, together with an adjacent portion of the package, is

active upon so that a vertically dependent orientation is imparted to the packages.

7. The apparatus as claimed in claim 6, **characterised in that** each one of the slots (23) has at least one roller means which is disposed so that, together with the defining surface of the slot, it forms a gap of a few tenth of a millimetre in order thereby to permit the through passage of the packaging blank web at the same time as the retainer members (17, 18) are prevented from leaving each respective slot (23).

8. The apparatus as claimed in claim 7, **characterised in that** each one of the slots has two pairs of roller means (25) which pairwise define a gap for the through passage of the retainer members (17,18) of the packaging blank web (1).

9. The apparatus as claimed in claim 8, **characterised in that** the slots at each respective end where the packaging blank web (1) runs into the guide means is slightly flared in order to facilitate the passage of the web into the slot.

10. The apparatus as claimed in claim 9, **characterised in that** said roller means consist of one or two balls in each position which are inserted through holes which, in respect of their depth, are precision-drilled so that the depth, together with a locking screw, automatically defines the gap requisite for passage of the web.

Patentansprüche

1. Verfahren zum Führen einer Bahn (1) von Pakkungszuschnitten, die einer Füllstation (nicht gezeigt) zugeführt werden, in der die einzelnen geöffneten Zuschnitte (2) gefüllt werden, wobei die Bahn vorzugsweise der Füllstation sequenziell zugeführt wird derart, dass das Füllen der Zuschnitte (2) in einem Zeitintervall zwischen den Zufuhrschritten erfolgt, wobei die Bahn (1) aus einem Behälter - bspw. einem Karton - zugeführt wird, der eine vorbestimmte Anzahl von Packungszuschnitten (2) enthält, die jeweils eine erste Wand (3), eine der ersten gegenüberliegende zweite Wand (4), eine längsverlaufende erste und eine zweite Kante (5, 6) sowie an der ersten Kante (5) einen Bodenbereich (7) sowie weiterhin auch zwei Verbindungszonen (8, 9) aufweisen, die quer zur Längsrichtung der Bahn verlaufen und den ersten und den zweiten seitlichen Verschluss (10,11) des Zuschnitts (1) bilden, wobei weiterhin die Bahn Schlitze (12) enthält, die quer zu ihrer Transportrichtung verlaufen und zwischen den Verbindungszonen (8, 9) zweier aneinander grenzender Packungszuschnitte (2) liegen, deren jeweilige Wand (3,4) zwei gegenüberliegende Kantenbereiche (15,16) aufweist, die in der Längsrichtung der Bahn an deren anderer Kante (6) verlaufen und jeweils ein durchlaufendes Halteelement (17,18) aufweisen, das mit mechanischen Einrichtungen zum Führen der Kantenteile (15, 16) zusammenarbeitet, wenn die Bahn (1) durch die Füllstation geführt wird, wobei beiderseits der Querschlitze (12) zwischen den Zuschnitten und den Halteelementen (17, 18) Längsschlitze (21, 22) angeordnet sind, **dadurch gekennzeichnet, dass** in Verbindung mit den aufeinander folgenden Zufuhrschritten die Halteelemente (17, 18) in Schlitze (23) eingeführt werden, die quer zur Füllstation in einer Führungseinrichtung (24) verlaufen, wobei die Halteelemente (17,18) in einem gewissen Ausmaß bis zur maximalen Öffnungsbreite des Packungszuschnitts (2) getrennt werden, und zwar gleichzeitig mit einer Drehung der Halteelemente (17,18) um einen Winkel zwischen 60° und 120° im Uhrzeiger- bzw. Gegenuhrzeigersinn bezüglich der vertikalen Ebene derart, dass die Halteelemente (17, 18) und der angrenzende Teil der Packungszuschnitte (2) im wesentlichen horizontal gerichtet werden, wodurch sämtliche Zuschnitte (2) in eine vertikal herabhängende Lage gebracht werden.

2. Verfahren nach Anspruch 1 , **dadurch gekennzeichnet, dass** die Halteelemente (17, 18) beim Einführen in die Schlitze (23) um einen Winkel von etwa 90° im Uhrzeiger- bzw. Gegenuhrzeigersinn gedreht werden.

3. Verfahren nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** die Halteelemente (17,18) in der jeweiligen Führungseinrichtung (24) durch mindestens eine in jedem Schlitz angeordnete Rolleneinrichtung (25) geführt/gehaltert werden.

4. Verfahren nach einem der vorgehenden Ansprüche, **dadurch gekennzeichnet, dass** die Halteelemente gebogen und in die mit Rolleneinrichtungen (25) versehenen Führungseinrichtungen (24) eingeführt werden, da die zur jeweiligen Führungseinrichtung führende Mündung weich gerundet und/oder gekrümmt ist.

5. Verfahren nach Anspruch 3 oder 4, **dadurch gekennzeichnet, dass** die Halteelemente (17, 18) im jeweiligen Schlitz (23) von zwei Paaren gegenüberliegender Kugeln (25) geführt/gehaltert werden.

6. Vorrichtung zum Führen einer Bahn (1) von Pakkungszuschnitten, um ein Verwirren derselben beim Transport von einem Magazinbehälter zu einer Füllstation zu vermeiden, wobei die Packungszuschnitte entlang eines Kantenteils (15,16) längs verlaufende Halteelemente (17, 18) aufweisen, die

an den Kantenbereich unmittelbar angrenzen und die Kantenbereiche der Bahn zusammenfügen und in einem begrenzten Ausmaßen versteifen und die durch gegenseitige Verschiebung in ihrer Längsrichtung und Trennen in der Füllstation die Bildung von Öffnungen in Parallelepiped-Form in den Pakkungen ermöglichen, **dadurch gekennzeichnet, dass** sie eine Führungseinrichtung (24) mit einem Hauptteil umfaßt, der unten puckartig und oben kegelstumpfförmig ist, wobei der puckartige Teil Querschlitze (23) hat, die für das Einführen und Hindurchtreten der Halteelemente der Zuschnittbahn vorgesehen sind, wobei die Schlitze (23) um zwischen 60° und 120° relativ zur vertikalen Ebene gedreht liegen, so dass beim Durchlauf der Halteelemente auf jeden von ihnen zusammen mit einem angrenzenden Teil der Packung eingewirkt wird, so dass den Packungen eine vertikal herabhängende Orientierung erteilt wird.

7. Vorrichtung nach Anspruch 6, **dadurch gekennzeichnet, dass** die Schlitze (23) jeweils mit mindestens einer Rolleneinrichtung versehen sind, die so liegt, dass zusammen mit den Schlitzinnenflächen ein Spalt in der Größenordnung von einigen Zehntel Millimetern entsteht, der einen Durchlauf der Zuschnittbahn erlaubt und gleichzeitig die Halteelemente (17,18) am Verlassen des jeweiligen Schlitzes (23) hindert.

8. Vorrichtung nach Anspruch 7, **dadurch gekennzeichnet, dass** die Schlitze jeweils zwei Paare von Rolleneinrichtungen (25) aufweisen, die paarweise einen Spalt für den Durchlauf der Halteelemente (17,18) der Zuschnittbahn (1) bilden.

9. Vorrichtung nach Anspruch 8, **dadurch gekennzeichnet, dass** die Schlitze an demjenigen Ende, wo die Zuschnittbahn (1) in die Führung einläuft, geringfügig aufgeweitet sind, um das Einlaufen der Bahn in den Schlitz zu erleichtern.

10. Vorrichtung nach Anspruch 9, **dadurch gekennzeichnet, dass** die Rolleneinrichtung in jeder Position aus einer oder zwei Kugeln besteht, die durch Löcher eingeführt sind, die hinsichtlich ihrer Tiefe präzisionsgebohrt sind, so dass die Tiefe gemeinsam mit einer Sperrschraube selbsttätig den zum Durchlauf der Zuschnittbahn erforderlichen Spalt bildet.

Revendications

1. Procédé de guidage d'une bande (1) de découpe d'emballage qui est alimentée dans une station de remplissage (non représentée) à laquelle, les découpes d'emballages individuelles, ouvertes (2) sont remplies, ladite bande étant de préférence alimentée à la station de remplissage de manière séquentielle de sorte que le remplissage des découpes (2) ait lieu dans un intervalle de temps formé entre les occasions d'alimentation, et la bande (1) est fournie à partir d'un récipient, par exemple, un carton, contenant une quantité prédéterminée de découpes d'emballage, chaque découpe (2) laissant apparaître une première paroi (3), une seconde paroi (4) opposée à la première paroi, des premier et second bords longitudinaux (5, 6), ainsi qu'une partie inférieure (7) au niveau dudit premier bord (5), en outre et également deux zones de raccordement (8, 9) transversales par rapport à la direction longitudinale de la bande et formant les premier et second joints latéraux (10, 11) de la découpe (1), où la bande comprend des fentes (12) qui sont transversales par rapport à leur direction de transport et qui sont disposées entre les zones de raccordement (8, 9) des deux découpes d'emballage mutuellement adjacentes (2), dont la paroi respective (3, 4) possède deux parties de bord opposées (15, 16) qui s'étendent dans la direction longitudinale de la bande au niveau de son autre bord (6), chacune comprenant un élément de retenue continu (17, 18), dont chacun coopère avec des moyens mécaniques pour guider les parties de bord (15, 16) lorsque la bande (1) est déplacée dans la station de remplissage, les fentes longitudinales (21, 22) étant disposées de chaque côté des fentes transversales (12) entre les découpes (1) et les éléments de retenue (17, 18), **caractérisé en ce que** les éléments de retenue (17, 18) sont, par rapport aux étapes d'alimentation séquentielles, déplacés dans les fentes (23) situées de manière transversale par rapport à la station d'alimentation, dans les moyens de guidage (24), lesdits éléments de retenue (17, 18) étant séparés dans une certaine mesure jusqu'à la largeur d'ouverture maximum de la découpe d'emballage (2) en même temps que lesdits éléments de retenue (17, 18) sont retournés selon un angle s'élevant entre 60° et 120° dans le sens des aiguilles d'une montre et dans le sens inverse des aiguilles d'une montre, respectivement, par rapport au plan vertical, de sorte que les éléments de retenue (17, 18) et la partie située de manière adjacente des découpes d'emballage (2) sont orientés sensiblement horizontalement, toutes les découpes (2) étant disposées à la verticale.

2. Procédé selon la revendication 1, **caractérisé en ce que** lesdits éléments de retenue (17, 18) sont, par rapport à l'insertion dans les fentes (23), retournés selon un angle d'approximativement 90° dans le sens des aiguilles d'une montre et dans le sens inverse des aiguilles d'une montre, respectivement.

3. Procédé selon la revendication 1 ou 2, **caractérisé**

en ce que lesdits éléments de retenue (17, 18) dans chacun des moyens de guidage respectif (24) sont guidés/retenus au moins par un moyen formant rouleau (25) situé dans chaque fente.

4. Procédé selon l'une quelconque des revendications précédentes, **caractérisé en ce que** les éléments de support sont guidés d'une manière flexible dans les moyens de guidage (24) prévus avec les moyens formant rouleaux (25), en conséquence de quoi, chaque bouche respective desdits moyens de guidage a une configuration légèrement arrondie et/ou légèrement incurvée.

5. Procédé selon la revendication 3 ou 4, **caractérisé en ce que** lesdits éléments de retenue (17, 18) sont guidés/retenus dans chaque fente respective (23) par deux paires de billes mutuellement opposées (25).

6. Appareil de guidage d'une bande de découpe d'emballage (1) pour éviter son enchevêtrement lorsque la bande est transportée de manière séquentielle depuis un récipient magasin vers une station de remplissage, les découpes d'emballage ayant, le long de leur partie de bord (15, 16), des éléments de retenue longitudinaux (17, 18) qui sont contigus le long de la partie de bord et unis et, dans une mesure limitée, rigidifient lesdites parties de bord de la bande, et qui par déplacement mutuel dans leur direction longitudinale ainsi que séparation dans ladite station de remplissage permettent la formation d'ouvertures parallélépipédiques dans les emballages, **caractérisé en ce qu'**il comprend des moyens de guidage (24) avec un corps qui est en forme de disque dans sa partie inférieure et dans sa partie supérieure a une configuration tronconique, où la partie en forme de disque possède des fentes transversales (23) qui sont prévues pour l'insertion et le passage débouchant des éléments de retenue de la bande de découpe d'emballage, et lesdites fentes (23) sont disposées en rotation entre 60 et 120° par rapport au plan vertical, de sorte que sur le passage débouchant des éléments de retenue, chacune d'entre elles, conjointement à une partie adjacente, est active de sorte qu'une orientation verticalement dépendante est transmise aux emballages.

7. Appareil selon la revendication 6, **caractérisé en ce que** chacune des fentes (23) possède au moins un moyen formant rouleau qui est disposé de sorte que, conjointement à la surface de définition de la fente, il forme un espace de quelques dixièmes de millimètre afin de permettre ainsi le passage débouchant de la bande de découpe d'emballage en même temps que l'on empêche les éléments de retenue (17, 18) de quitter chaque fente respective (23).

8. Appareil selon la revendication 7, **caractérisé en ce que** chacune des fentes possède deux paires de moyens formant rouleaux (25) dont les paires définissent un espace pour le passage débouchant des éléments de retenue (17, 18) de la bande de découpe d'emballage (1).

9. Appareil selon la revendication 8, **caractérisé en ce que** la fente au niveau de chaque extrémité respective où la bande de découpe d'emballage (1) s'étend dans les moyens de guidage, est légèrement évasée afin de faciliter le passage de la bande dans la fente.

10. Appareil selon la revendication 9, **caractérisé en ce que** lesdits moyens formant rouleaux se composent d'une ou de deux billes dans chaque position qui sont insérées à travers des trous qui, par rapport à leur profondeur, sont percés avec précision de sorte que la profondeur, conjointement à une vis de blocage, définit automatiquement l'espace nécessaire pour le passage de la bande.

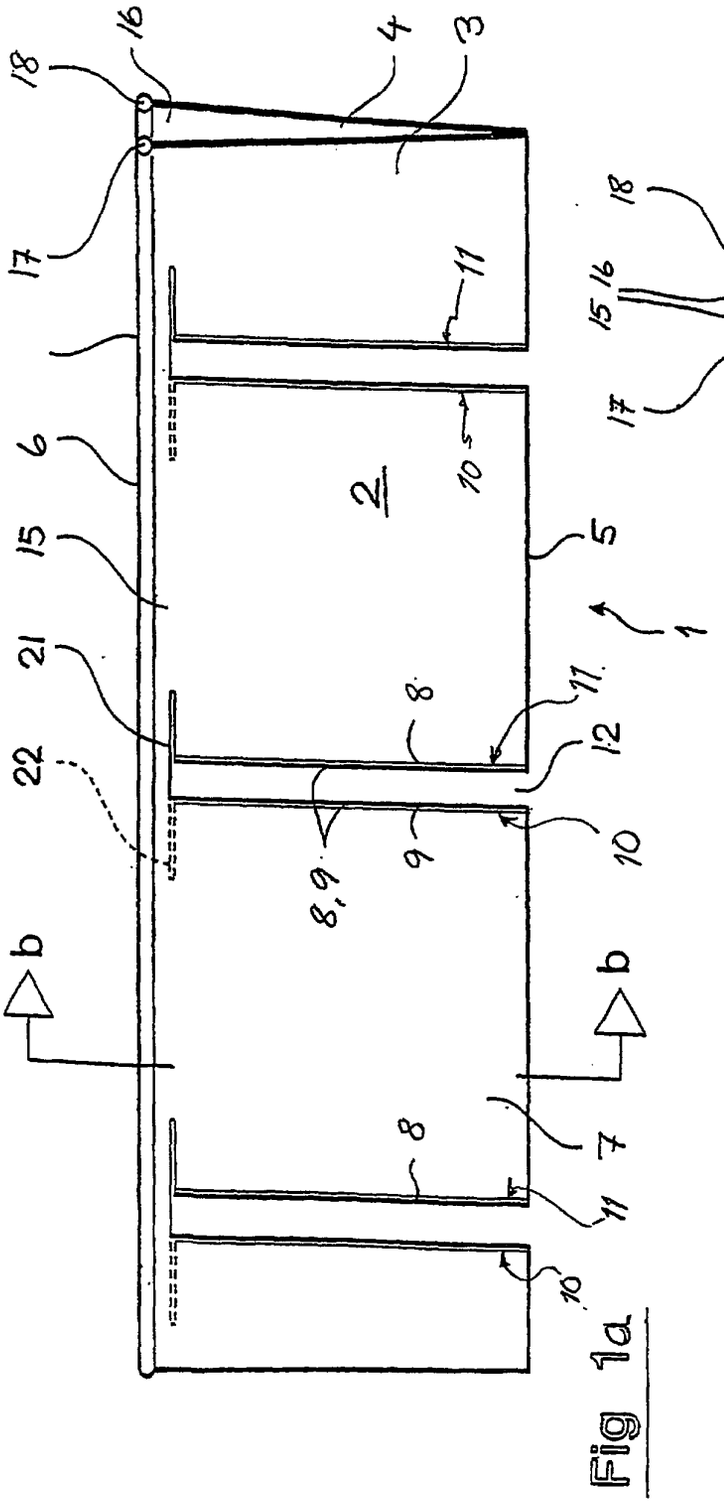

18
16
4
3
17
11
6
2
10
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21
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22
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b
b
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11
10

Fig 1a

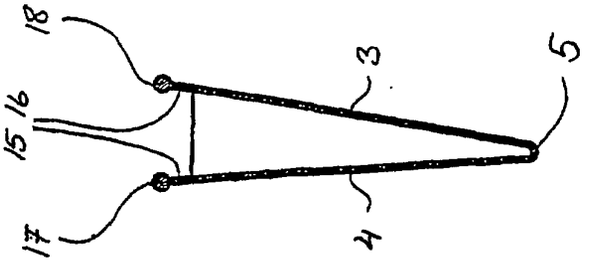

18
3
5
15 16
17
4

Fig 1b

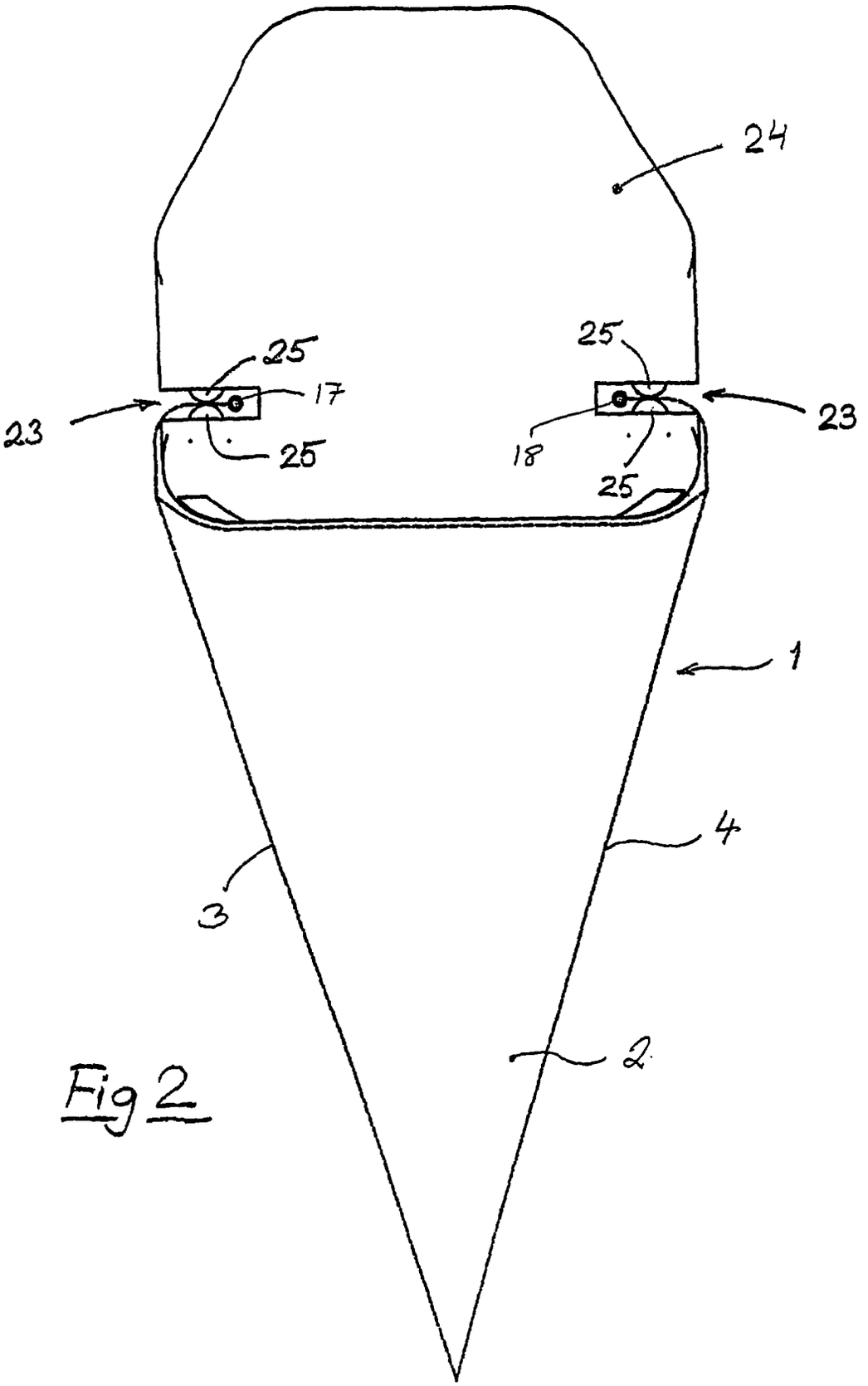


Fig 2

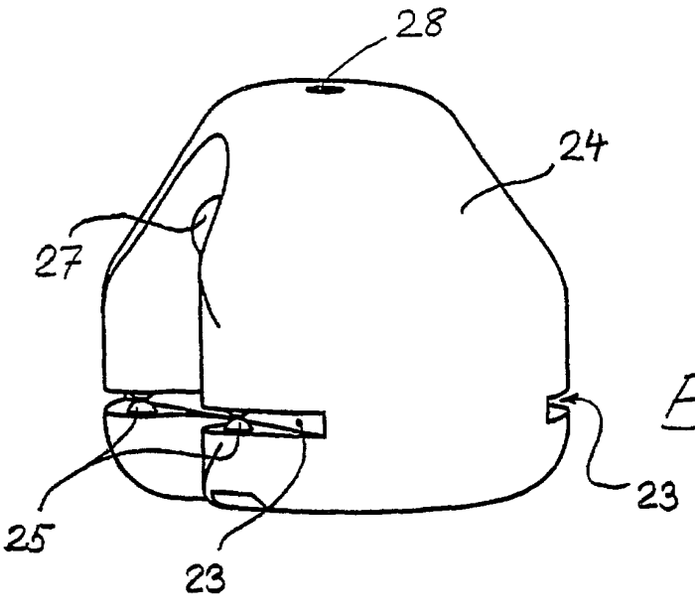


Fig 3a

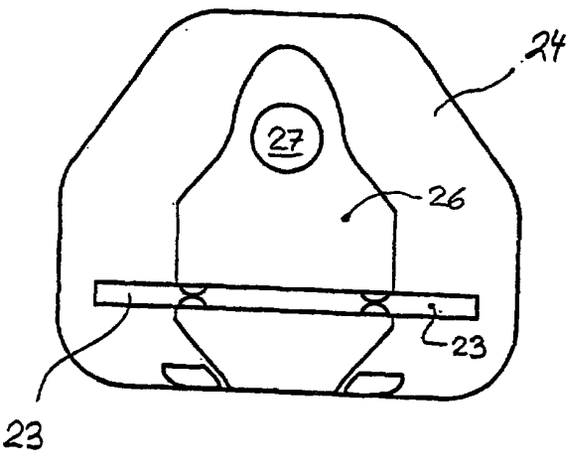


Fig 3b

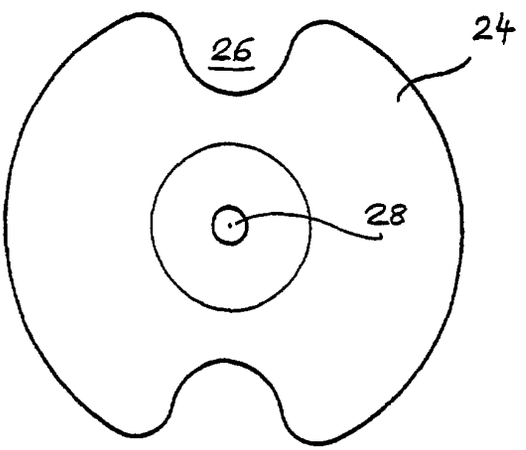
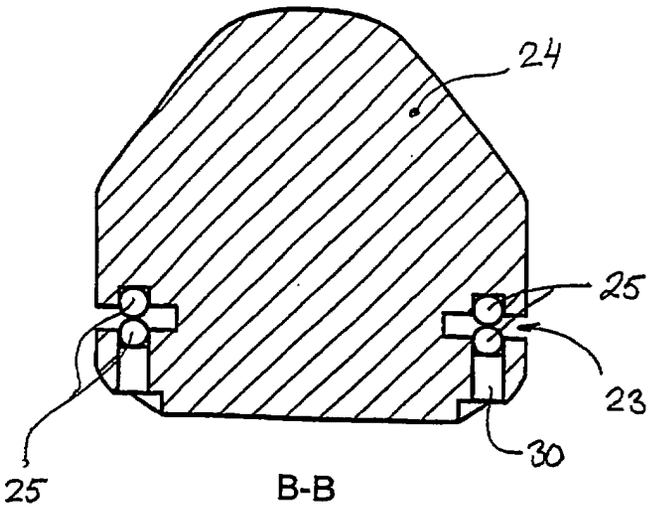


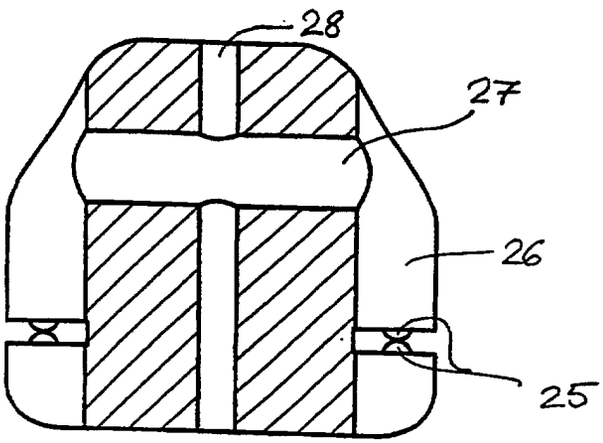
Fig 3c

Fig 4b



B-B

Fig 4a



A-A

Fig 4

