

Description

This invention relates to panel interlocking means for securing together a pair of panels, more particularly the base panels of a wrap-around type package. The panels are provided by the opposite ends of a wrapper blank which are brought together and interlocked.

Locking tabs which are struck from one end of a carton wrapper and which are arranged to be driven through corresponding apertures, defined by retaining tabs, struck from an opposite end of the wrapper are well known, e.g. from US Patent No 4,093,116.

However, the present invention primarily is concerned with the interlocking of panels by causing a locking tab to be engaged by a relative sliding movement into a locking aperture.

Known panel interlocking arrangements in which a locking tab is caused to be engaged by relative sliding movement into a locking aperture formed adjacent a foldable edge strip of a carton panel is disclosed in both FR-A-2 447 863 and US-A-3 341 908. Neither of these disclosures is concerned with a blank for forming a wrap-around article carrier as in the present invention. Moreover in FR-A-2 447 863 the "anchoring tab" unfolds following engagement in the locking aperture and is displaced to engage a panel portion adjacent the locking slit. In US-A-3 341 908 there is no foldable "anchoring tab" but only a trail portion of the male locking tab which acts as a locking edge. In the blank of the present invention, the anchoring tabs may be located on one end panel of the blank and the locking slits may be provided in an opposite end panel of the blank. Both the opposed end panels form overlapping base panels in the completed package. The blank is applied to a group of articles to be packaged in a packaging machine as the articles are conveyed together, through the machine by folding the blank around the article group. The anchoring tabs are positioned so that they are folded to facilitate insertion into the locking slits during the folding operation of the blank. The locking slit is formed in a fold line of its associated panel the fold line being spaced inwardly from the end edges of that panel to define a foldable edge strip. The edge strip has an abutment edge and a trailing edge of the locking tab lies substantially parallel to the locking slit when the locking tab is engaged.

The present invention provides a blank for forming a wraparound carton, an arrangement for securing together a pair of panels of the blank, said arrangement comprising a locking tab projecting from an end edge of one of said panels and a locking slit provided adjacent an end edge of the other of said panels, said locking tab having a

leading main portion, an anchoring portion provided with a trailing edge portion, said locking slit being disposed along a fold line spaced inwardly from, and extending substantially parallel to the end edge of said other panel to define a foldable edge strip said locking slit being arranged with respect to said fold line so that the locking slit is temporarily opened when said edge strip is folded out of the plane of the other of said panels, as the wraparound carton is formed to facilitate the insertion of the locking tab and providing an abutment edge characterized in that the anchoring portion is provided by a tab hinged along a fold line to one side of said main portion of the locking tab and folded into overlapping relationship with said main portion when said locking tab is being inserted into said locking slit so that at least a portion of the trailing edge lies substantially parallel to at least a portion of the locking slit when the locking tab has been inserted in the locking slit and the anchoring tab is disposed in folded overlapping relationship with the main portion of the locking tab.

A number of embodiments of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:-

FIGURE 1 shows a pair of panels, which may be opposite ends of a single wrapper blank, in close proximity, one of which includes a locking tab and the other of which includes a locking slit;

FIGURE 2 is a perspective view of the panels of FIGURE 1 immediately prior to being interlocked and where the anchoring tab is in an intermediate folded position.

FIGURE 3 shows schematically a locking tab and locking slit of modified construction prior to being interlocked.

FIGURE 4 shows schematically the locking tab and locking slit of FIGURE 3 interlocked with the anchoring tab in folded overlapping relationship with respect to the main portion of the locking tab;

FIGURE 5 is similar to FIGURE 3 but showing a further modified construction;

FIGURE 6 is similar to FIGURE 4 but showing the locking tab and locking slit of FIGURE 6 interlocked;

FIGURE 7 is similar to FIGURE 3 but showing a still further modified and preferred construction;

FIGURE 8 is similar to FIGURE 4 but showing the locking tab and locking slit of FIGURE 7 interlocked;

FIGURE 9 shows in more specific detail the construction of the preferred form of locking tab and locking slit depicted in FIGURES 7 and 8;

FIGURE 10 shows yet another modified construction depicting both the locking tab and the locking slit before, and on completion of locking;

FIGURE 11 shows another modified locking tab for cooperation with the locking slit shown in FIGURE 11; and

FIGURE 12 shows a modification applicable to any of the locking tabs according to the invention.

Referring first to FIGURES 1 and 2 a pair of panels 10, 12 respectively, are adapted to be interlocked and, are formed from paperboard or similar foldable sheet material. Panel 10 includes a locking tab 14 projecting outwardly in the plane of the panel from the end edge 16. The locking tab 14 comprises a main portion 18 and an integral anchoring tab 20 which is hinged to one side edge of the main portion 18 along a fold line 22. The fold line is substantially perpendicular to the end edge 16 of panel 10. The trailing edge 24 of the anchoring tab is spaced from end edge 16 and, in use, provides a locking edge for cooperation with an abutment edge defined by a locking slit in panel 12. In this embodiment the main portion 18 is formed to include a nose 26 which projects beyond the foldable anchoring tab to lead insertion of the locking tab in a locking slit of panel 12.

Panel 12 includes a locking slit 28 in the form of a shallow "V" which is struck from panel 12 along a fold line 30 extending parallel to the end edge 12a of panel 12. Thus, panel 12 has a foldable front edge strip 32. The slit is formed by a continuous cut line comprising a first part 34 extending along strip 32 towards the end edge of the panel at an acute angle with respect to fold line 30; a return part 36 extending back to meet fold line 30 at an acute angle with respect thereto; and an end part 38 extending along fold line 30 which provides an abutment edge on the edge strip 32 for cooperation with the trailing edge 24 of the anchoring tab. When front edge strip 32 is folded out of the plane of the blank the slit is opened and the first and return parts 34,36 define a guide projection 40 extending outwardly from fold line 30.

In order to lock together panels 10 and 12, first the anchoring tab 20 is folded 180° about fold line 22 into face contacting relationship with the underside of the main portion 18. Also, the front edge strip 32 is folded about fold line 30 out of the plane of the blank (Figure 2) to open the slit 28. Once the anchoring tab has been folded thus, the maximum transverse dimension (corresponding to the maximum width of the main portion) from fold line 22 to the opposite edge of the tab is sized so that the locking tab can be slidably engaged in the locking slit 28. The locking tab may be an interference fit in the locking slit. Hence, locking tab 14 can be inserted into the slit until the trailing edge 24 of the anchoring tab has moved past, that is to say, cleared the abutment edge 38 of the locking slit. The natural resilience of the paperboard material

then allows the folded anchoring tab automatically to spring back into a more upright position unless otherwise constrained whereby the trailing edge 24 at or adjacent fold line 22 is brought into a position in which it will abut against the abutment edge 38 when tension is applied to the panels in opposition to the locking direction i.e. in a direction tending to move the panels apart. Thus, the abutting engagement between edge 24 and edge 38 of the locking slit maintains the panel locked together. The projection 40 and the nose 26 of the locking tab 14 cooperate to aid in the alignment of the locking tab into the slit during locking.

In some circumstances, e.g. where the panels are base panels of a packaging wrapper and packed articles are seated on the interlocked panels, both the front edge strip 32 of panel 12 and the anchoring tab 20 are flat, that is parallel to the plane of the panels. Nevertheless, the abutment between trailing edge 24 at or adjacent fold line 22 and abutment edge 38 maintains the panels interlocked. Moreover, the double-ply thickness of material provided by both the main portion 18 and anchoring tab 20 is sufficient to prevent withdrawal of the locking tab 18 from the locking slit. It will be appreciated that in this locking configuration, the trailing edge 24 lies substantially parallel to the abutment edge 38 to enhance the engagement between the panels.

Referring now to Figures 3 and 4 there is shown a first modified construction comprising panels 42 and 44, respectively. Panel 42 includes a locking tab 46 projecting outwardly in the plane of the panel from end edge 48. The locking tab 46 comprises a main portion 50 and an integral anchoring tab 52 which is hinged to one side edge of the main portion 50 along a fold line 54. The fold line is inclined, 15° (angle α) with respect to a notional line 'X' depicting the locking direction of the locking tab. It will be seen that line 'X' is perpendicular to the edge 48 of panel 42 and to the leading edge 56 of the locking tab. Further, the fold line 54 meets the trailing edge 58 of the anchoring tab at a location which is displaced outwardly from the base of the locking tab thus providing a hooked edge 'h' when the anchoring tab is folded. The hooked edge 'h' is provided by a trailing edge of the main portion 50 of the locking tab and either hooked edge 'h' or trailing edge 58 (or both) may provide the locking edge for cooperation with an abutment edge defined by a locking slit in panel 44.

Panel 44 includes a locking slit 60 in the form of a shallow 'V' which is struck from panel 44 along a fold line 62 extending parallel to the end edge 64 of panel 44. Thus, panel 44 has a foldable front edge strip 66. The slit 60 is formed by a continuous cut line comprising a first part 68 extending

along strip 66 towards the end edge 64 of the panel at an acute angle with respect to fold line 62 and which provides an abutment edge on the edge strip 66 for cooperation with trailing edge of the locking tab, that is to say, the trailing edge 58 of the anchoring tab and/or the hooked edge 'h'. The slit 60 further includes a return part 70 extending back to meet fold line 62 at an acute angle with respect thereto. When front edge strip 66 is folded out of the plane of the blank the slit is opened and the first and return parts define a guide projection 72 projecting outwardly from fold line 62.

In order to lock together panels 42 and 44 as shown in Figure 4, first the anchoring tab is folded 180° about fold line 62 into face contacting relationship with the main portion 50. Also, the front edge strip 66 of panel 44 is folded about fold line 62 out of the plane of the blank to open the locking slit 60. Once the anchoring tab has been folded thus, the maximum transverse dimension (corresponding to the maximum width of the main portion 50) from fold line 54 to the opposite edge 74 of the locking tab is sized so that the locking tab can be slidably engaged in the locking slit 60. The locking tab may be an interference fit in the locking slit. It will be appreciated that the side edges of the locking tab when the anchoring tab is folded diverge towards the leading edge 56 of the locking tab thus allowing progressive engagement of the tab into the slit. Hence, the locking tab can be inserted into the slit until the trailing edge of the locking tab clears the abutment edge 68 of the slit. It will be seen that the trailing edge corner "c" of the anchoring tab is angled so that it simultaneously clears an adjacent part of the return edge 70 of the slit.

The anchoring tab 52 remains flat when the lock is incorporated as part of a wraparound carton so that the trailing edge 58 of the anchoring tab lies substantially parallel to the abutment edge 68 of the locking slit thus providing a positive locking engagement between the panels. In circumstances where there is transverse sliding and/or skewing of the panels relative to one another, the hooked portion "h" of the main portion 50 adjacent trailing edge 58 engages the abutment edge 68 of the locking slit to maintain the locking relationship between the panels.

The second modified construction shown in figures 5 and 6 is similar to the immediately preceding embodiment and like parts are designated like reference numerals with the addition of suffix 'a'. However, in this second modified construction the configuration of the locking slit 60a is reversed to give a broader abutment edge 68a. Consequently, the trailing edge 58a of the anchoring tab is given a rake angle ' β ' in order that it can lie substantially parallel to the abutment edge 68a of

the locking slit when it is in is folded overlapping relationship as shown in Figure 6.

It has been found that whilst the first and second modified embodiments are satisfactory, there is a risk that locking engagement between the trailing edge of the locking tab and the abutment edge defined by the locking slit does not occur if the locking tab is not inserted sufficiently to ensure that the trailing edge clears the abutment edge. This may occur as a result of the angular edge 74/74a being arrested against the adjacent end of the locking slit.

Thus, the third modified construction shown in Figures 7 to 9 incorporates modifications to both the locking tab and locking slit as described below. In other respects this embodiment is similar to the two immediately preceding embodiments and like parts are designated like reference numerals with the addition of suffix 'b'.

In this embodiment, the abutment edge 68b of the locking slit 60b is provided by a short cut line extending along the fold line 62b. In this respect the configuration of the slit more closely resembles that of the first embodiment described with reference to Figures 1 to 3. Hence, slit 60b comprises abutment edge 68b, and angular cuts 70b and 76.

In order better to ensure full insertion of the locking tab 46b into the locking slit 60b the side edge 74b of the locking tab is curvilinear so that there is no sharp angular change in the configuration of the side edge.

Moreover, in order to maintain the trailing edge 58b of the anchoring tab parallel to the short abutment edge of the locking slit, the rake angle ' β ' of the trailing edge is increased. As best seen in Figure 10, angle ' β ' is approximately 30°. Hence, when the anchoring tab is in folded condition with the locking tab inserted into the locking slit (Figure 8) a portion of the trailing edge 58b adjacent fold line 54b lies parallel to the short abutment edge 68b. However, since the cut line 70b extends away from the trailing edge of the anchoring tab, a clearance or safety angle 'Sa' is present between trailing edge 58b and slit line 70b. This configuration has the advantage that the major part of the trailing edge clears the cut line 70b of the locking slit prior to full insertion of the locking tab earlier than in the previous embodiments whereby the likelihood of disengagement of the panels substantially is reduced.

Figure 10 shows a further modified embodiment in which like parts of the preceding three embodiments are designated like reference numerals with the addition of suffix 'c'.

In this embodiment the trailing edge of the anchoring tab comprises two contiguous edges 58c and 58c' in which the edge 58c is angled so as to

lie parallel to the abutment edge 68c. The remaining part of the trailing edge 58c' is given a steeper rake angle so that a clearance or safety angle 'Sa' as in the immediately preceding embodiment is produced.

A general formula for producing a trailing edge of the locking tab which will engage the abutment edge of the locking slit in parallel relationship may be expressed as follows:-

$$\gamma = 90^\circ - \alpha + \beta$$

where:- 'γ' is the angle between that part of the trailing edge of the locking tab which is to engage the abutment edge of the locking slit and the fold line by which the anchoring tab is hinged to the main portion of the locking tab;

'α' is the angle between a notional line depicting the locking direction of the locking tab and the fold line by which the anchoring tab is hinged to the main portion of the locking tab, and

'β' is the angle between a notional extension of the abutment edge of the locking slit and a line which is perpendicular to the notional line depicting the locking direction of the locking tab.

The further modified embodiment shown in Figure 11 is similar to the Figure 10 embodiment and like parts are designated like reference numerals with the addition of suffix 'd'. In this embodiment the hooked 'throat' of the locking tab 46d is omitted and in this respect the locking tab resembles that described with reference to Figures 1 and 2.

It has been found that on some occasions, when a deep hooked portion is provided, the anchoring tab may fold along a fold line which is displaced inwardly of the tab instead of along the correct fold line provided resulting in unreliable locking. In this embodiment the fold line 54d terminates at the inner edge of the trailing edge 58d which assists in avoiding incorrect folding of the anchoring tab 52d.

FIGURE 12 shows a locking tab similar to that illustrated in FIGURE 9 and in which like parts are designated like reference numerals but with the addition of suffix 'e'.

In this modified locking tab a transverse fold line 'F' extends across the base of the tab substantially in alignment with the free edge 48e of the panel from which the locking tab projects.

Fold line 'F' gives the tab more flexibility so that the tab can bend more readily to facilitate guiding the tab into a cooperating locking slit. This modification is applicable to all the locking tabs disclosed herein and it is to be understood that the location of the fold line 'F' at the base of the locking tab may not necessarily be in precise alignment with the edge 48e.

Claims

1. In a blank for forming a wraparound carton, an arrangement for securing together a pair of panels (10, 12) of the blank, said arrangement comprising a locking tab (14) projecting from an end edge (16) of one of said panels (10) and a locking slit (28) provided adjacent an end edge (12a) of the other of said panels (12), said locking tab having a leading main portion (18), an anchoring portion provided with a trailing edge portion (22), said locking slit being disposed along a fold line (30) spaced inwardly from, and extending substantially parallel to the end edge of said other panel to define a foldable edge strip (32), said locking slit being arranged with respect to said fold line so that the locking slit is temporarily opened when said edge strips is folded out of the plane of the other of said panels, as the wraparound carton is formed, to facilitate the insertion of the locking tab, and providing an abutment edge characterized in that the anchoring portion is provided by a tab hinged along a fold line to one side of said main portion of the locking tab and folded into overlapping relationship with said main portion when said locking tab is inserted into said locking slit so that at least a portion of the trailing edge lies substantially parallel to at least a portion of the locking slit when the locking tab has been inserted in the locking slit.
2. The arrangement according to claim 1, wherein the fold line (22) by which the anchoring tab is hinged to the main portion (18) of the locking tab is inclined with respect to a notional line depicting the direction of insertion of the locking tab into the locking slit so that the side edge (22) of the locking tab provided by the fold line upon folding of the anchoring tab is convergent, with respect to the opposite edge of the locking tab, towards the free leading end (26) of the locking tab.
3. The arrangement according to claim 2, wherein the angle of inclination with respect to said notional line is approximately 15 degrees.
4. The arrangement according to any of the preceding claims, wherein the side edge of the locking tab opposite the edge to which the anchoring tab is hinged is curvilinear.
5. The arrangement according to any of the preceding claims, wherein the trailing edge of the locking tab is inclined with respect to a line

lie parallel to the abutment edge 68c. The remaining part of the trailing edge 58c' is given a steeper rake angle so that a clearance or safety angle 'Sa' as in the immediately preceding embodiment is produced.

A general formula for producing a trailing edge of the locking tab which will engage the abutment edge of the locking slit in parallel relationship may be expressed as follows:-

$$\gamma = 90^\circ - \alpha + \beta$$

where:- 'γ' is the angle between that part of the trailing edge of the locking tab which is to engage the abutment edge of the locking slit and the fold line by which the anchoring tab is hinged to the main portion of the locking tab;

'α' is the angle between a notional line depicting the locking direction of the locking tab and the fold line by which the anchoring tab is hinged to the main portion of the locking tab, and

'β' is the angle between a notional extension of the abutment edge of the locking slit and a line which is perpendicular to the notional line depicting the locking direction of the locking tab.

The further modified embodiment shown in Figure 11 is similar to the Figure 10 embodiment and like parts are designated like reference numerals with the addition of suffix 'd'. In this embodiment the hooked 'throat' of the locking tab 46d is omitted and in this respect the locking tab resembles that described with reference to Figures 1 and 2.

It has been found that on some occasions, when a deep hooked portion is provided, the anchoring tab may fold along a fold line which is displaced inwardly of the tab instead of along the correct fold line provided resulting in unreliable locking. In this embodiment the fold line 54d terminates at the inner edge of the trailing edge 58d which assists in avoiding incorrect folding of the anchoring tab 52d.

FIGURE 12 shows a locking tab similar to that illustrated in FIGURE 9 and in which like parts are designated like reference numerals but with the addition of suffix 'e'.

In this modified locking tab a transverse fold line 'F' extends across the base of the tab substantially in alignment with the free edge 48e of the panel from which the locking tab projects.

Fold line 'F' gives the tab more flexibility so that the tab can bend more readily to facilitate guiding the tab into a cooperating locking slit. This modification is applicable to all the locking tabs disclosed herein and it is to be understood that the location of the fold line 'F' at the base of the locking tab may not necessarily be in precise alignment with the edge 48e.

Claims

1. In a blank for forming a wraparound carton, an arrangement for securing together a pair of panels (10, 12) of the blank, said arrangement comprising a locking tab (14) projecting from an end edge (16) of one of said panels (10) and a locking slit (28) provided adjacent an end edge (12a) of the other of said panels (12), said locking tab having a leading main portion (18), an anchoring portion provided with a trailing edge portion (22), said locking slit being disposed along a fold line (30) spaced inwardly from, and extending substantially parallel to the end edge of said other panel to define a foldable edge strip (32), said locking slit being arranged with respect to said fold line so that the locking slit is temporarily opened when said edge strips is folded out of the plane of the other of said panels, as the wraparound carton is formed, to facilitate the insertion of the locking tab, and providing an abutment edge characterized in that the anchoring portion is provided by a tab hinged along a fold line to one side of said main portion of the locking tab and folded into overlapping relationship with said main portion when said locking tab is inserted into said locking slit so that at least a portion of the trailing edge lies substantially parallel to at least a portion of the locking slit when the locking tab has been inserted in the locking slit.
2. The arrangement according to claim 1, wherein the fold line (22) by which the anchoring tab is hinged to the main portion (18) of the locking tab is inclined with respect to a notional line depicting the direction of insertion of the locking tab into the locking slit so that the side edge (22) of the locking tab provided by the fold line upon folding of the anchoring tab is convergent, with respect to the opposite edge of the locking tab, towards the free leading end (26) of the locking tab.
3. The arrangement according to claim 2, wherein the angle of inclination with respect to said notional line is approximately 15 degrees.
4. The arrangement according to any of the preceding claims, wherein the side edge of the locking tab opposite the edge to which the anchoring tab is hinged is curvilinear.
5. The arrangement according to any of the preceding claims, wherein the trailing edge of the locking tab is inclined with respect to a line



which is perpendicular to a notional line depicting the direction of insertion of the locking tab into the locking slit.

- 5 The arrangement according to claim 5, wherein the angle of inclination is approximately 30 degrees.
7. The arrangement according to any of the preceding claims, wherein a fold line extends across said locking tab adjacent the end of said one panel from which the locking tab projects. 10
8. The arrangement according to any of the preceding claims, wherein said locking slit (28) is generally in the form of a shallow "V" which extends into said edge strip (32) and interrupts said fold line (30). 15
9. The arrangement according to claim 8, wherein said locking slit is asymmetrical so that the legs (34,36) of said "V" are of different lengths. 20
10. The arrangement according to claim 8, wherein said locking slit is symmetrical so that the legs (70b,76) of the "V" are of substantially equal lengths. 25
11. The arrangement according to claim 8, wherein said locking slit (28) comprises a first part (34) extending towards the end edge (12a) of said other panel (12) at an acute angle with respect to said fold line, a return part (36) extending back to meet said fold line at an acute angle with respect thereto and an end part (38) extending substantially along said fold line. 30 35

Patentansprüche

1. Zuschnitt zum Ausbilden eines Umschlingungskartons mit einer Anordnung zum Miteinanderverbinden eines Wandpaares (10, 12) des Zuschnittes, die eine Verriegelungsglasche (14), die von einer Stirnseitenkante (16) einer der Wände (10) hervorragt, und einen Verriegelungsschlitz (28), der benachbart einer Stirnseitenkante (12a) der anderen der Wände (12) angeordnet ist, aufweist, wobei die Verriegelungsglasche einen Einführhauptabschnitt (18) und einen mit einem nachzuziehenden Kantenabschnitt (22) versehenen Verankerungsabschnitt aufweist, wobei der Verriegelungsschlitz entlang einer Faltlinie (30) angeordnet ist, die nach innen beabstandet ist und sich im wesentlichen parallel zur Stirnseitenkante der anderen Wand erstreckt, um einen faltbaren 40 45 50 55

Randstreifen (32) zu begrenzen, wobei der Verriegelungsschlitz in Bezug auf die Faltlinie derart angebracht ist, daß der Verriegelungsschlitz vorübergehend geöffnet ist, wenn der Randstreifen aus der Ebene der anderen der Wände herausgefaltet ist, so wie der Karton ausgebildet wird, um das Einstecken der Verriegelungsglasche zu erleichtern, und eine Anlagekante, aufweist, dadurch gekennzeichnet, daß der Verankerungsabschnitt durch eine Lasche gebildet ist, die entlang einer Faltlinie an einer Seite des Hauptabschnittes der Verriegelungsglasche angelenkt und in Überlappingsbeziehung mit dem Hauptabschnitt gefaltet ist, wenn die Verriegelungsglasche in den Verriegelungsschlitz eingesteckt wird, so daß zumindest ein Abschnitt der nachzuziehenden Kante im wesentlichen parallel zu wenigstens einem Abschnitt des Verriegelungsschlitzes liegt, wenn die Verriegelungsglasche in den Verriegelungsschlitz eingesteckt worden ist.

2. Anordnung nach Anspruch 1, dadurch gekennzeichnet, daß die Faltlinie (22), an der die Verankerungsglasche am Hauptabschnitt (18) der Verriegelungsglasche angelenkt ist, in Bezug auf eine gedachte Linie geneigt ist, die in Einsteckrichtung der Verriegelungsglasche in den Verriegelungsschlitz gezogen ist, so daß die Seitenkante (22) der Verriegelungsglasche, die durch die Faltlinie durch Falten der Verankerungsglasche zum freien Vorderende (26) der Verriegelungsglasche gebildet wird, in Bezug zur entgegengesetzten Kante der Verriegelungsglasche konvergent ist.
3. Anordnung nach Anspruch 2, dadurch gekennzeichnet, daß der Neigungswinkel in Bezug zur gedachten Linie ungefähr 15° beträgt.
4. Anordnung nach irgendeinem der vorangegangenen Ansprüche, dadurch gekennzeichnet, daß die Seitenkante der Verriegelungsglasche gegenüber der Kante, an der die Verankerungsglasche angelenkt ist, krummlinig ist.
5. Anordnung nach irgendeinem der vorangegangenen Ansprüche, dadurch gekennzeichnet, daß die nachzuziehende Kante der Verriegelungsglasche in Bezug auf eine Linie geneigt ist, die senkrecht zu einer gedachten Linie verläuft, die in Einsteckrichtung der Verriegelungsglasche in den Verriegelungsschlitz gezogen ist.
6. Anordnung nach Anspruch 5, dadurch gekennzeichnet, daß der Neigungswinkel ungefähr 30° beträgt.



7. Anordnung nach irgendeinem der vorangegangenen Ansprüche, dadurch gekennzeichnet, daß sich eine Faltlinie quer zur Verriegelungslasche benachbart dem Ende der ersten Wand, von der Verriegelungslasche hervorragt, erstreckt. 5
8. Anordnung nach irgendeinem der vorangegangenen Ansprüche, dadurch gekennzeichnet, daß der Verriegelungsschlitz (28) im allgemeinen in Form eines flachen "V" ausgebildet ist, die sich in den Randstreifen (32) erstreckt und die Faltlinie (30) durchbricht. 10
9. Anordnung nach Anspruch 8, dadurch gekennzeichnet, daß der Verriegelungsschlitz asymmetrisch ist, so daß die Schenkel (70b, 76) des "V" unterschiedliche Längen aufweisen. 15
10. Anordnung nach Anspruch 8, dadurch gekennzeichnet, daß der Verriegelungsschlitz symmetrisch ist, so daß die Schenkel (70b, 76) des "V" im wesentlichen gleiche Längen aufweisen. 20
11. Anordnung nach Anspruch 8, dadurch gekennzeichnet, daß der Verriegelungsschlitz (28) ein erstes Teil (34), daß sich zur Stirnseitenkante (12a) der anderen Wand (12) in einem spitzen Winkel in Bezug zur Faltlinie erstreckt, ein Umkehrteil (36), das sich zurück erstreckt, um die Faltlinie in einem spitzen Winkel in Bezug dazu zu treffen, und ein Endteil (38) aufweist, das sich im wesentlichen entlang der Faltlinie erstreckt. 25

Revendications

1. Ebauche destinée à former un carton enveloppant autour d'articles comportant un moyen de verrouillage pour assujettir ensemble une paire de panneaux (10, 12) de l'ébauche, le moyen de verrouillage comprenant une patte de blocage (14) faisant saillie d'un bord d'extrémité (16) de l'un des panneaux (10) et une fente de blocage (28) située à proximité d'un bord d'extrémité (12a) de l'autre panneau (12), la patte de blocage comportant une partie principale avant (18) et une partie d'ancrage munie d'un bord arrière (22), la fente de blocage étant située le long d'une ligne de pliage (30) espacée vers l'intérieur du bord d'extrémité de l'autre panneau en s'étendant sensiblement parallèlement à ce bord pour constituer une bande d'extrémité pliable (32) et étant agencée par rapport à la ligne de pliage de telle manière qu'elle soit temporairement ouverte lorsque la bande d'extrémité est pliée hors du plan de 40

l'autre panneau, le carton enveloppant étant conçu pour faciliter l'insertion de la patte de blocage et procurer un bord d'aboutement, moyen de verrouillage caractérisé par le fait que la partie d'ancrage est munie d'une patte articulée le long d'une ligne de pliage d'un côté de la partie principale de la patte de blocage et pliée en recouvrement avec cette partie principale lorsque la patte de blocage est insérée dans la fente de blocage et qu'une partie au moins de son bord arrière se trouve sensiblement parallèle à une partie au moins de la fente de blocage une fois la patte de blocage insérée dans ladite fente de blocage.

2. Moyen de verrouillage selon la revendication 1, caractérisé par le fait que la ligne de pliage (22) par laquelle la patte d'ancrage est articulée sur la partie principale (18) de la patte de blocage est inclinée par rapport à une ligne imaginaire représentant le sens d'insertion de la patte de blocage dans la fente correspondante de telle manière que le bord latéral (22) de la patte de blocage constituée par la ligne de pliage après repliage de la patte d'ancrage soit convergent relativement au bord opposé de la patte de blocage, en direction de l'extrémité avant libre (26) de la patte de blocage. 30
3. Moyen de verrouillage selon la revendication 2, caractérisé par le fait que l'angle d'inclinaison formé par rapport à ladite ligne imaginaire est d'environ 15 degrés. 35
4. Moyen de verrouillage selon l'une quelconque des revendications 1 à 3, caractérisé par le fait que le bord latéral de la patte de blocage opposé au bord d'articulation de la patte d'ancrage est curviligne. 40
5. Moyen de verrouillage selon l'une quelconque des revendications 1 à 4, caractérisé par le fait que le bord arrière de la patte de blocage est incliné par rapport à une ligne qui est perpendiculaire à une ligne imaginaire représentant la direction d'insertion de la patte de blocage dans la fente de blocage. 45
6. Moyen de verrouillage selon la revendication 5, caractérisé par le fait que l'angle d'inclinaison est d'environ 30 degrés. 50
7. Moyen de verrouillage selon l'une quelconque des revendications 1 à 6, caractérisé par le fait qu'une ligne de pliage s'étend transversalement à la patte de blocage à proximité de l'extrémité de l'un des panneaux à partir duquel la patte de blocage fait saillie. 55



8. Moyen de verrouillage selon l'une quelconque des revendications 1 à 7, caractérisé par le fait que la fente de blocage (28) se présente généralement sous la forme d'un "V" peu profond qui s'étend dans la bande d'extrémité (32) et coupe la ligne de pliage (30). 5
9. Moyen de verrouillage selon la revendication 8, caractérisé par le fait que la fente de blocage est asymétrique de telle manière que les ailes (34, 36) du "V" soient de longueurs différentes. 10
10. Moyen de verrouillage selon la revendication 8, caractérisé par le fait que la fente de blocage est symétrique de telle sorte que les ailes (70b, 76) du "V" soient de longueurs sensiblement égales. 15
11. Moyen de verrouillage selon la revendication 8, caractérisé par le fait que la fente de blocage (28) comprend une première partie (34) s'étendant vers le bord d'extrémité (12a) de l'autre panneau (12) en formant un angle aigu par rapport à la ligne de pliage, une partie de retour (36) s'étendant vers l'arrière pour rencontrer la ligne de pliage également en formant un angle aigu par rapport à celle-ci, et une partie terminale (38) s'étendant sensiblement le long de la ligne de pliage. 20 25 30

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