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(54) **Method to form a two-piece package comprising a cover and a tray and package obtained by this method**

(57) -Method to form a package comprising: >-the translation of the product (P) along a first translation path (P1) by use of a lying beneath blank-tray (B) on which the product (P) is placed; the translation of a blank-cover (A/A1) along a second translation path (P2) comprising a first segment (P2-ab) extending in an inclined orientation from upstream to downstream from upwards to downwards along which the blank-cover (A/A1) is arranged above the top face of the product (P) and a second segment (P2-bc) extending in a straightway parallel orientation with respect to the first translation path (P1) along which the lateral edges of the blank-cover (A/A1) are formed around the top of the product (P); >-the translation of the blank-tray (B) along a third translation path (P3) along which the lateral edges of the blank-tray (B) are formed around the bottom side of the product (P). -A package obtained by the use of this method.

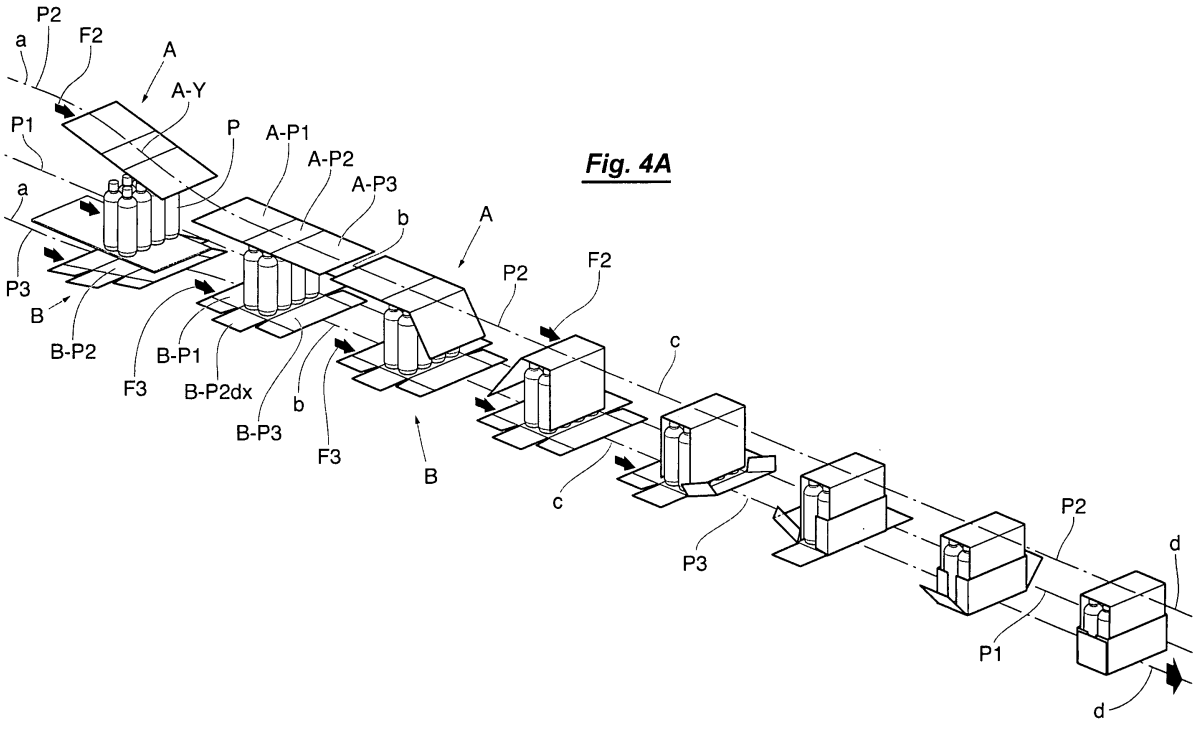

Fig. 4A

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Description

[0001] -The present invention relates to a method to form a two piece package comprising a cover and a tray as well as a packaging obtained by this method.

[0002] -In particular, the present invention relates to a method to form a two piece package comprising a cover with a quadrangular shaped top with lateral edges or sides and a tray with a quadrangular shaped base with lateral edges or sides, in which, said cover and said tray are preferably joint together in a telescopic and/or extractable manner, in order to protect the product during its transportation and in order to immediately make it visible and ready for sale as it lies on the tray after the removal of the cover.

Background of the invention

[0003] -Currently, the known methods used to form two piece packages, as for example packages of the above mentioned type, have discontinuous and/or intermittent and/or multidirectional motions, with reference to the blank-cover and/or the blank-tray and/or the product translation, and consequently know methods require use of low operational speed with relative low productivity.

[0004] -In addition, the carrying out of said known methods include the use of automatic machines with large overall dimensions.

[0005] -Finally, said known methods, include operations that entail the application of force and/or of stress on the product to be packaged, with resulting damages to the product, and if said product consists in a group of bottles, this stress and/or collision and/or friction between the bottles and the blank-cover may cause undesired overturning of the aforementioned bottles and/or an undesired change in the required form of the batch.

Purpose of the invention

[0006] -The purpose of the present invention is to solve the aforementioned problems.

[0007] -The invention, which is characterized by the claims, resolves the problem of creating a method to form a two piece package used to pack a product, in which said package comprises a cover with lateral edges placed above and around the top of the product and a tray with lateral edges placed beneath and around the bottom of the product, in which said method is characterized by the fact that the product is translated from upstream to downstream along a first rectilinear longitudinal translation path by means of the blank-tray placed beneath it in which said blank-tray acts as a transportation plane for said product; by the fact that the blank-cover is translated along a second translation path placed in a vertical upper-longitudinal alignment with respect to aforementioned first translation path, in which said second translation path comprises: >-a first segment extending inclined from upstream to downstream from upwards to downwards along which the blank-cover is arranged above the upper face of the product and >-a second segment extending straightway and parallel with respect to the first translation path along which the lateral edges of the blank-cover are formed around the top of the product; and by the fact that the blank-tray is translated along a third translation path extending longitudinally in a lower position-extension and in a vertical alignment with respect to said first and second translation paths, in which along said third translation path the blank-tray is translated in a straightway motion downstream with the product placed on the blank-tray and during said translation the lateral edges of the aforementioned blank-tray are formed around the bottom side of said product.

[0008] -Further characteristics and advantages of the present invention are rendered more evident by the detailed description that follows of some of the preferred forms of its practical realization, described here only as an example and without any restrictive intent, made with reference to the figures of the enclosed drawings, in which:

- Figure 1, illustrates a blank-cover according to a first realization;
- Figure 2 illustrates a blank-cover according to a second realization;
- Figure 3 illustrates a blank-tray;
- Figures 4 and 4A illustrate the method subject of the present invention according to a first realization;
- Figures 5 and 5A illustrate the method subject of the present invention according to a second realization;
- Figure 6 illustrates the method subject of the present invention according to a third realization;
- Figure 7 illustrates the method subject of the present invention according to a fourth realization;
- Figure 8 illustrates the method subject of the present invention according a fifth real ization;
- Figure 9 illustrates the method subject of the present invention according a sixth realization.

The Blanks

[0009] -With reference to figure 1, it illustrates a blank-cover comprising a first panel A-P1, a second panel A-P2 and a third panel A-P3, defined by means of creasing lines and arranged in succession with respect to an extension axes AY.

[0010] -With reference to figure 2, it illustrates a blank-cover A1 similar to the one represented by the figure 1, in which, the same above mentioned panels, here indicated as A1-P1, A1-P2 and A1-P3, are further equipped with closing flaps A1-P1sx, A1-P1 dx, A1-P2sx, A1-P2dx, A1-P3sx, A1-P3dx, arranged to the transversally opposed ends of each panel.

[0011] -With reference to figure 3, it illustrates a blank-tray B, comprising a first panel B-P1, a second panel B-P2, and a third panel B-P3, defined by means of creasing lines and arranged in succession with respect to an ex-

tension axes BY, in which said panels are provided with closing flaps B1-P1sx, B1-P1dx, B1-P2sx, B1-P2dx, B1-P3sx, B1-P3dx, arranged to the transversally opposed ends of each panel.

The Basic Method

[0012] -With reference to figures 4 and 4A, as well as to other figures, the basic method to form a two piece package comprises the following operative configuration: >-the translation of the product P along a first rectilinear longitudinal translation path P1 from upstream to downstream by means of the blank-tray B placed beneath it, in which said blank-tray acts as a transportation plane for said product P; >-the translation of the blank-cover, A/A1, along a second translation path P2 extending longitudinally and arranged above and in a vertical alignment with respect to aforementioned first translation path P1, in which said second translation path P2 comprises a first segment P2-ab extending inclined from upstream to downstream from upward to downwards along which the blank-cover A/A1 is translated and arranged above the upper face of the product P, and a second segment P2-bc, extending in a straightway parallel orientation with respect to the first translation path P1, along which the lateral edges of the blank-cover A/A1 are formed around the top of the product P; >-the translation of the blank-tray, B, along a third translation path P3 extending in a lower-longitudinal orientation and in a vertical alignment with respect to said first and second translation paths P1, P2, in which the aforementioned third translation path P3 comprises a segment P3-bd extending in a straightway parallel orientation with respect to the first translation path P1, along which the blank-tray B is translated and the lateral edges of said blank-tray B are formed around the bottom of the aforementioned product P.

[0013] -Again with reference to figures 4-4A, said third translation path P3 preferably comprises: >-a first segment P3-ab extending in an inclined orientation from upstream towards downstream from downwards to upwards along which the blank-tray is translated from upstream towards downstream from downwards to upwards and the product P moving along the first translation path is placed on the aforementioned blank-tray B; >-a second segment P3-bc, extending in a straightway parallel orientation with respect to the first and second translation paths P1 and P2 along which the blank-tray B is translated towards downstream in order to straightway translate along the first translation path P1 the product P and thus allow the formation of one or more lateral edges of the blank-cover A/A1 around the top side of the product P; and >-a third segment P3-cd, extending in a straightway parallel orientation with respect to the first and second translation paths P1, P2, along which the blank-tray B is translated straightway towards downstream in order to form the lateral edges of the blank-tray B around the bottom side of the product P, preferably by applying glue spots, 4Cdx, 4Csx, fig.4A, on the upper face of the closing flaps B-P2sx e B-P2dx before their folding upwards, or else, see fig. 5A, by applying glue spots, 5Csx e 5Cdx (the other glue spots are not visible) on the external faces of the closing flaps B-P1sx, B-P1dx, B-P3sx, B-P3dx, of the first B-P1 and of the third B-P3 panels of the blank-tray B.

[0014] -In particular, and always preferably, with reference to above quoted figures, the lower face of the product P is placed on the inferior panel B-P2 of the blank-tray B, and then, and in this manner, the product P is translated along the first translation path P1 by use of a pushing force F3 directly applied to the blank-tray B, in order to avoid any application of any force directly to the product for its downstream translation.

[0015] -Furthermore, it is preferable for the blank-cover, A/A1, to be translated along the second translation path P2 by applying of a pushing force, F2, directly to the blank-cover, A/A1, in which said force F2 is able to translate said blank-cover, A/A1, with substantially the same linear forward speed as the one set for the laying beneath product P.

[0016] -The blank-cover, A/A1, in all the above described forms, always comprise an upper panel, A-P2/A1-P2, used to cover the upper face of the product P and, in such context, depending on the type of the blank-cover and/or on the type of the product to be packaged, two operative configurations can be realised: >-a first operative configuration in which the aforementioned upper panel A-P2/A1-P2 is translated along the second segment P2-bc of the second translation path P2 in a suspended manner and to a closer upper level with respect to the top of the product P, thus avoiding any contact/friction between the aforementioned upper panel A-P2/A1-P2 and the top (upper face) of the product; or >-a second operative configuration, in which the same upper panel A-P2/A1-P2 is placed in contact with and/or supported on top of said product P.

[0017] -Also preferably, the product P would firstly be placed on the blank-tray B and, afterwards, while translating the product P towards downstream by the push-motion of the blank-tray B, the blank-cover A/A1 would be placed above and/or on the top of the product

1° Realization - Figg. 4-4A

[0018] -According to a first realization of the method hereby illustrated by fig. 4 and 4A, the blank-cover A is translated along said second translation path P2 with its extension axes A-Y longitudinally orientated with respect to the second translation path P2 and with the first panel A-P1 upstream oriented.

[0019] -Therefore, along the first segment P2-ab of the second translation path P2 the second panel A-P2 is translated and arranged in vertically alignment above the top face of the product P and, along the second segment P2-bc of the second translation path P2, the blank-cover A is translated downstream maintaining the vertical alignment between the second panel A-P2 and the top face

of the product P and the following operations are executed: **a)**-the third front panel A-P3 is folded downwards against the front face of the product P; **b)-**the first panel A-P1 is folded against the back face of the product P; and, afterwards, further operations are executed in order to form the lateral edges of the blank-tray B around the bottom of the product P and/or around the lower portion of the cover's edges, i.e. along the segment P3-cd.

2° Realization- Figg. 5-A

[0020] -According to a second realization of the method hereby illustrated by fig. 5 and 5A, the blank-cover A is translated along said second translation path P2 with its extension axes A-Y perpendicularly orientated with respect to the second translation path P2.

[0021] -Therefore, along the first segment P2-ab of the second translation path P2, the second panel A-P2 is translated and arranged in vertically alignment above the top face of the product P and, along the second segment P2-bc of the second translation path P2, the blank-cover A is translated downstream maintaining the vertical alignment between the second panel A-P2 and the top face of the product P and the following operations are executed: a)-the first panel A-P1 and the third panel A-P3 are folded against the respective opposed lateral faces of the product P; afterwards, further operations are executed in order to form the lateral edges of the blank-tray B around the bottom of the product P and/or around the lower portion of the cover's edges, i.e. along the segment P3-cd.

3° Realization - FIG. 6

[0022] -According to a third realization of the method hereby illustrated by fig. 6, a blank-cover A1 is translated along said second translation path P2, in which said blank-cover A1, as in the previous realizations, comprises the three panels A1-P1 A1-P2 A1-P3, arranged in succession with respect to a longitudinal extension axes A1-Y, in which, in addition, each of the said three panel has respective closing flaps at the transversal ends, A1-P1sx, A1-P1dx, A1-P2sx, A1-P2dx, A1-P3sx, A1-P3dx.

[0023] -According to this third realization of the method, the blank-cover A1 is translated along said second translation path, P2, with its extension axes, A1-Y, longitudinally orientated with respect to the second translation path P2 and with the first panel A-P1 upstream oriented and, in succession, along the first segment P2-ab of the second translation path P2, the upper panel A1-P2 is translated and arranged in a vertical alignment above the top face of the product P, and along said second segment P2-bc of the same second translation path, P2, the blank-cover, A1, is translated downstream maintaining the vertical alignment between the second panel A1-P2 and the top face of the product P and the following operations are executed: a)-the third panel A1-P3 is folded downwards and against the front face of the product P; b)-the closing flaps, A1-P1sx, A1-P1dx, of the first panel A1-P1 of the blank-cover A1 are folded downwards; c)-the closing flaps, A1-P3sx, A1-P3dx, of the third panel A1-P3 are folded inwards and against the product P; d)-the first panel A1-P1 is folded downwards and against the product P; e)-the closing flaps, A1-P2sx, A1-P2dx, of the second panel A1-P2 are folded downwards and against the closing flaps, A1-P1 sx, A1-P3sx, A1-P1 dx, A1-P3dx, of the first and third panels, A1-P1 and A1-P3; and afterwards further operations are executed in order to form the lateral edges of the blank-tray B around the bottom of the product P and/or around the lower portion of the cover.

[0024] -Furthermore, preferably, before of the operation e), glue would be applied on the external sides of the closing flaps A1-P3dx, A1-P1dx, A1-P3sx, A1-P1sx of the first panel A1-P1 and of the third panel A1-P3, as for instance the glue spots 6-C1dx, 6-C2dx (the glue spots situated on the other side are not visible).

4° Realization - Fig. 7

[0025] -According to a fourth realization of the method hereby illustrated by fig. 7, the blank-cover A1 is translated along the aforementioned second translation path, P2, with its extension axes, A1-Y, in a longitudinal orientation with respect to the second translation path P2 and, along said first segment P2-ab of the second translation path P2, the blank-cover A1 is translated and arranged with its second panel A1-P2 vertically aligned above the top face of the product P, afterwards, translating downwards the blank-cover A1 along the second segment P2-bc of the second translation path P2 maintaining the vertical alignment between the second panel A1-P2 and the top face of the product P the following operations are executed: a)-the closing flaps A1-P1sx, A1-P1dx of the first panel A1-P1 and the closing flaps A1-P3sx, A1-P3dx of the third panel A1-P3 of the blank-cover A1 are folded downwards; b)-the first panel A1-P1 and the third panel A1-P3 of the blank-cover A1 are folded downwards and against the back and the front faces of the product P; c)-the closing flaps A1-P2sx, A1-P2dx of the second panel A1-P2 are folded downwards and against the closing flaps A1-P1sx, A1-P3sx, A1-P1dx, A1P3-dx of the first A1-P1 and third A1-P3 panels; afterwards further operations are executed in order to form the lateral edges of the blank-tray B around the bottom of the product P and/or around the lower portions of the cover.

[0026] -Furthermore, preferably, before of the operation c), glue would be applied on the external faces of the closing flaps A1-P3dx, A1-P1dx, A1-P3sx, A1-P1sx of the first panel A1-P1 and of the third panel A1-P3, as for instance the glue spots 7-C1dx, 7-C2dx (the glue spots situated on the other side are not visible).

5° Realization - Fig. 8

[0027] -According to a fifth realization of the method

hereby illustrated by fig. 8, the blank-cover A1 is translated along said second translation path, P2, with its extension axes, A1-Y, perpendicularly orientated with respect to the second translation path P2 and, along the aforementioned first segment P2-ab of the second translation path P2, the blank-cover A1 is translated and arranged with its second panel A1-P2 in a vertical alignment above the top face of the product P and, afterwards, the blank-cover A1 is translated along said second segment P2-bc of the second translation path P2 maintaining the vertical alignment between the second panel A1-P2 and the top face of the product P and the following operations are executed: a)-the first panel A1-P1 and the third panel A1-P3 of the blank-cover A1 are folded downwards and against the opposed lateral faces the product P; b)-the closing flaps A1-P1 sx, A1-P1 dx, of the first panel A1-P1 and the closing flaps A1-P3sx, A1-P3dx of the third panel A1-P3 of the blank-cover A1 are folded against the product P; c)-the closing flaps, A1-P2sx, A1-P2dx, of the second panel A1-P2 are folded downwards and against the closing flaps A1-P1 sx, A1-P3sx, A1-P1 dx, A1-P3dx of the first A1-P1 and of the third A1-P3 panels; afterwards further operations are executed in order to form the lateral edges of the blank-tray B around the bottom of the product P and/or around the lower portions of the cover.

[0028] -Furthermore, preferably, before the operation c) glue would be applied on the external sides of the closing flaps A1-P3dx, A1-P1 dx, A1-P3sx, A1-P1 sx, of the first panel A1-P1 and of the third panel A1-P3, as for instance the glue spots 8-C1, 8-C2 (the spots situated on the other side are not visible), which would applied before the operation b), that is when said closing flaps are still open.

6° Realization - Fig. 9

[0029] -According to a sixth realization of the method hereby illustrated by fig. 9, the blank-cover A1 is translated along the aforementioned second translation path, P2, with its extension axes, A1-Y, in a perpendicular orientation with respect to the said second translation path P2 and, along the first segment P2-ab of the second translation path P2, the blank-cover A1 is translated and arranged with its second panel A1-P2 vertically aligned above the top face of the product P, and, afterwards, the blank-cover A1 is translated along the second segment, P2-bc, of the second translation path P2, maintaining the vertical alignment between the second panel A1-P2 and the top face of the product P and the following operations are executed: **a)**-the closing flaps A1-P1 sx, A-P1dx of the first panel A1-P1 and the closing flaps A1-P3sx, A-P3dx of the third panel A1-P3 of the blank-cover A1 are folded downwards; **b)**-the first panel A1-P1 and the third panel A1-P3 of the blank-cover A1 are folded downwards against the respective laterally opposed sides of the product P; c)-the closing flaps A-P2sx, A-P2dx, of the second panel A1-P2 are folded downwards and against the closing flaps A-P1sx, A-P3sx, A-P1dx, A-P3dx of the first A1-P1 and third A1-P3 panels; afterwards further operations are executed in order to form the lateral edges of the blank-tray B around the bottom of the product P and/or around the lower portions of the cover.

[0030] -Furthermore, preferably, before the operation c) glue would be applied on the external sides of the closing flaps, A1-P3dx, A1-P1 dx, A1-P3sx, A1-P1 sx, of the first panel A1-P1 and the third panel A1-P3, as for instance the glue spots 9-C1sx, 9-C2sx, 9-C1dx, 9-C2dx.

[0031] -With reference to all above described realizations, it is preferable to join together the closing flaps A1-P1 sx, A1-P2sx, A1-P3sx / A1-P1 dx, A1-P2dx, A1-P3dx in their folded position, thus consolidating the lateral edges resulted by means of the blank-cover A1.

[0032] -The descriptions of the aforementioned methods are given purely as an example and are not to be considered a restriction and, therefore, it is obvious that suggested modifications and/or variations could be made to them during their practice and/or by their use, anyway within the scope of the following claims.

[0033] -In such context, these following claims also form an integral part of the description stated above.

Claims

01. Method to form a two piece package used to pack a product (P), in which said package comprises a cover with lateral edges placed above and around the top of the product (P) and a tray with lateral edges placed beneath and around the bottom of the product (P), **characterized by the fact that** the product (P) is translated from upstream to downstream along a first extending rectilinear longitudinal translation path (P1) by means of a blank-tray (B) placed beneath it in which said blank-tray (B) acts as a transportation plane for said product (P); **by the fact that** the blank-cover (A/A1) is translated along a second translation path (P2) extending in a vertical upper-longitudinal alignment with respect to said first translation path (P1), in which said second translation path (P2) comprises: >-a first segment (P2-ab) extending inclined from upstream to downstream from upwards to downwards along which the blank-cover (A/A1) is arranged above the upper face of the product (P) and >-a second segment (P2-bc) extending straightway and parallel with respect to the first translation path (P1) along which the lateral edges of the blank-cover (A/A1) are formed around the top of the product (P); and also **by the fact that** the blank-tray (B) is translated along a third translation path (P3) extending longitudinally and arranged in a lower position and in vertical alignment with respect to said first (P1) and second (P2) translation paths, in which along said third translation path (P3) the blank-tray (B) is translated in a straightway motion downstream with the product (P) placed on it and the lateral edges

of the aforementioned blank-tray are formed around the bottom side of said product.

02. Method according to Claim 1, **characterized by the fact that** the aforementioned third translation path (P3) comprises a second segment (P3-bc) extending in a straightway parallel orientation with respect to the first and second translation paths (P1, P2) along which the blank-tray (B) is translated downstream thus translating the product (P) in a straightway motion along the first translation path (P1), **by the fact that** a second segment (P2-bc) of the second translation path (P2) is placed above said second segment (P3-bc) of the third translation path (P3), and **by the fact that** along this second segment (P2-bc) of the second translation path (P2) the operations to form the lateral edges of the blank-cover (A/A1) around the top of the product (P) are executed.

03. Method according to one of the claims from 1 to 2, **characterized by the fact that** said third translation path (P3) comprises a third segment (P3-bc) extending straightway and parallel with respect to the first and second translation paths (P1, P2) along which the blank-tray (B) is translated downstream in order to form the lateral edges of the blank-tray (B) around the bottom of the product.

04. Method according to one of the claims from 1 to 3, **characterized by the fact that** said third translation path (P3) comprises a first segment (P3-ab) extending in an inclined orientation from upstream towards downstream from downwards to upwards along which the blank-tray (B) is arranged beneath the bottom face of the product (P).

05. Method according to one of the claims from 1 to 4, **characterized by the fact that** initially the product (P) is placed on the blank-tray (B) then the blank-cover (A/A1) is placed on the top of the product.

06. Method according to one of the claims from 1 to 5 in which said blank-tray (B) comprises at least an inferior panel (B-P2) used to cover the bottom face of the product (P), **characterized by the fact that** the bottom face of the product (P) is placed on said inferior panel (B-P2) thus translating the product (P) along the first translation path (P1) by means of a pushing force (F3) directly applied to said blank-tray (B).

07. Method according to one of the claims from 1 to 6, **characterized by the** fact that a pushing force (F2) is directly applied to the blank-cover (A/A1) in order to translate said blank-cover (A/A1) from upstream towards downstream along the second translation path (P2).

08. Method according to one of the claims from 1 to 7, **characterized by the fact that** the blank-cover (A/A1) is translated along the second translation path (P2) with substantially the same linear forward speed as the one set for the product (P) moving along the first translation path (P1).

09. Method according to one of the claims from 1 to 8, in which the aforementioned blank-cover (A/A1) comprises at least an upper panel (A-P2/A1-P2) used to cover the upper face of the product (P), **characterized by the fact that** this upper panel (A-P2/A1-P2) is translated along a second segment (P2-bc) of the second translation path (P2) in a suspended manner and to a closer upper level with respect to the top face of the product (P).

10. Method according to one of the claims from 1 to 9, in which said blank-cover (A/A1) comprises at least one upper panel (A-P2/A1-P2) used to cover the upper face of the product (P), **characterized by the fact that** this upper panel (A-P2/A1-P2) is translated along the second segment (P2-bc) of the second translation path (P2) laying on the top face of the product (P).

11. Method according to one of the claims from 1 to 10 (fig. 4-4A), in which the blank-cover (A) comprises a first panel (A-P1) a second panel (A-P2) and a third panel (A-P3) separated by creases and arranged in succession with respect to an extension axes (A-Y), **characterized by the fact that** the blank-cover (A) is translated along said second translation path (P2) with its extension axes (A-Y) longitudinally orientated with respect to the second translation path (P2) and with the first panel (A-P1) upstream oriented; **by the fact that** along a first inclined segment (P2-ab) of the second translation path (P2) the second panel (A-P2) is arranged in a vertical alignment above the top face of the product (P); **and by the fact that** the blank-cover (A) is moving downstream along the second segment (P2-bc) of the second translation path (P2) maintaining the vertical alignment between the second panel (A-P2) and the top face of the product (P) and the following operations are executed: **a)**-the third panel (A-P3) is folded downwards against the front face of the product (P); **b)**-the first panel (A-P1) is folded downwards against the back face of the product (P).

12. Method according to one of the claims from 1 to 10 (fig. 5-5A), in which the blank-cover (A) comprises a first panel (A-P1) a second panel (A-P2) and a third panel (A-P3) separated by creases and arranged in succession with respect to an extension axes (A-Y), **characterized by the fact** that the blank-cover (A) is translated along the aforementioned second translation path (P2) with its extension axes (A-Y) per-

pendicularly orientated with respect to the same second translation path (P2), **by the fact that** along a first segment (P2-ab) of the second translation path (P2) the blank-cover (A) is arranged with its second panel (A-P2) vertically alignment above the top side of the product (P), **and by the fact that** the blank-cover (A) is moving downstream along a second segment (P2-bc) of the second translation path (P2) maintaining the vertical alignment between the second panel (A-P2) and the top face of the product (P) and the following operations are executed: **a)**-the first panel (A-P1) and the third panel (A-P3) are folded downwards against the two respective opposed faces of the product (P).

13. Method according to one of the claims from 1 to 10 (fig. 6), in which the blank-cover (A1) comprises a first panel (A1-P1) a second panel (A1-P2) and a third panel (A1-P3) separated by creases and arranged in succession with respect to a longitudinally axes (A1-Y), in which said first panel (A1-P1) has closing flaps (A1-P1 sx, A1-P1 dx) arranged at its transversally opposed sides; in which said second panel (A1-P2) has closing flaps (A1-P2-sx, A1-P2-dx) arranged at its transversally opposed sides; in which said third panel (A1-P3) has closing flaps (A1-P3-sx, A1-P3-dx) arranged at its transversally opposed sides, **characterized by the fact that** the blank-cover (A1) is translated along the aforementioned second translation path (P2) with its extension axes (A1-Y) longitudinally orientated with respect to the second translation path (P2) and with the first panel (A1-P1) upstream oriented, **by** the fact that along a first segment (P2-ab) of the second translation path (P2) the upper panel (A1-P2) is arranged in a vertical alignment above the top face of the product (P), and **by the fact that** the blank-cover (A1) is moving downstream along a second segment (P2-bc) of the second translation path (P2) maintaining the vertical alignment between the second panel (A1-P2) and the top face of the product (P) and the following operations are executed: **a)**-the third panel (A1-P3) is folded downwards against the front side of the product (P); **b)**-the closing flaps (A1-P1sx, A-P1dx) of the first panel (A1-P1) of the blank-cover (A1) are folded downwards; c)-the closing flaps (A1-P3sx, A1-P3dx) of the third panel (A1-P3) are folded inwards against the product (P); **d)**-the first panel (A1-P1) is folded downwards against the product (P); **e)**-the closing flaps (A1-P2sx, A1-P2dx) of the second panel (A1-P2) are folded downwards against the closing flaps (A1-P1 sx, A1-P3sx, A1-P1 dx, A1-P3dx) of the first and third panels (A1-P1, A2-P3).

14. Method according to claim 13, **characterized by the fact that** before the operation e) glue (6-C1dx, 6-C2dx) is applied on the external sides of the closing flaps (A1-P3dx, A1-P1 dx, A1-P3sx, A1-P1 sx) of the first panel (A1-P1) and of the third panel (A1-P3).

15. Method according to claims from 1 to 7 (fig. 7), in which the blank-cover (A1) comprises a first panel (A1-P1) a second panel (A1-P2) and a third panel (A1-P3) separated by creases and arranged in succession with respect to a longitudinally axes (A1-Y), in which said first panel (A1-P1) has closing flaps (A1-P1sx, A1-P1dx) arranged at its transversally opposed sides, in which said second panel (A1-P2) has closing flaps (A1-P2sx, A1-P2dx) arranged at its transversally opposed sides, in which said third panel (A1-P3) has closing flaps (A1-P3sx, A1-P3dx) arranged at its transversally opposed sides, **characterized by the fact that** the blank-cover (A1) is translated along said second translation path (P2) with its extension axes (A1-Y) longitudinally orientated with respect to the same second translation path (P2); **by the fact that** along a first segment (P2-ab) of the second translation path (P2) the blank-cover (A1) is arranged with its second panel (A1-P2) vertically aligned above the top side of the product (P), and **by the fact that** the blank-cover (A1) is moving downstream along a second segment (P2-bc) of the second translation path (P2) maintaining the vertical alignment between the second panel (A1-P2) and the top side of the product (P) and the following operations are executed: **a)**-the closing flaps (A1-P1sx, A-P1 dx) of the first panel (A1-P1) and the closing flaps (A1-P3sx, A1-P3dx) of the third panel (A1-P3) of the blank-cover (A1) are folded downwards; **b)**-the first panel (A1-P1) and the third panel (A1-P3) of the blank-cover (A1) are folded downwards against the back and front faces of the product (P); c)-the closing flaps (A-P2sx, A-P2dx) of the second panel (A-P2) are folded downwards and against the closing flaps (A-P1sx, A-P3sx, A-P1dx, A-P3dx) of the first (A1-P1) and third (A1-P3) panels.

16. Method according to claim 15, **characterized by the fact that** before the operation c) glue (7-C1dx, 7-C2dx) is applied on the external sides of the closing flaps (A1-P3dx, A1-P1dx, A1-P3sx, A1-P1sx) of the first panel (A1-P1) and of the third panel (A1-P3).

17. Method according to one of the claims from 1 to 10 (fig. 8), in which the blank-cover (A1) comprises a first panel (A1-P1) a second panel (A1-P2) and a third panel (A1-P3) separated by creases and arranged in succession with respect to an extension longitudinally orientated axes (A1-Y), in which said first panel (A1-P1) has closing flaps (A1-P1sx, A1-P1dx) arranged at its transversally opposed sides, in which said second panel (A1-P2) has closing flaps (A1-P2sx, A1-P2dx) arranged at its transversally opposed sides, in which said third panel (A1-P3) has closing flaps (A1-P3sx, A1-P3dx) arranged at its transversally opposed sides, **characterized by the**

fact that along the aforementioned second translation path (P2) the blank-cover (A1) is translated with its extension axes (A1-Y) perpendicularly orientated with respect to the second translation path (P2), **by the fact that** the blank-cover (A1) is arranged along the first segment (P2-ab) of the second translation path (P2) with its second panel (A1-P2) vertically aligned above the top face of the product (P), and **by the fact that** the blank-cover (A1) is moving downstream along the second segment (P2-bc) of the second translation path (P2) maintaining the vertical alignment between the second panel (A1-P2) and the top face of the product (P) and the following operations are executed: **a)**-the first panel (A1-P1) and the third panel (A1-P3) of the blank-cover (A1) are folded downwards and against the laterally opposed faces of the product (P); **b)**-the closing flaps (A1-P1 sx, A1-P1 dx) of the first panel (A1-P1) and the closing flaps (A1-P3sx, A1-P3dx) of the third panel (A1-P3) of the blank-cover (A1) are folded against the product (P); c)-the closing flaps (A1-P2sx, A1-P2dx) of the second panel (A1-P2) are folded downwards and against the closing flaps (A-P1sx, A-P3sx, A-P1dx, A-P3dx) of the first (A1-P1) and third (A1-P3) panels.

18. Method according to claim 17, **characterized by the fact that** before the operation b) glue (8-C1, 8-C2) is applied on the external sides of the closing flaps (A1-P3dx, A1-P1 dx, A1-P3sx, A1-P1sx) of the first panel (A1-P1) and of the third panel (A1-P3).

19. Method according to one of the claims from 1 to 10 (fig. 9), in which the blank-cover (A1) comprises a first panel (A1-P1) a second panel (A1-P2) and a third panel (A1-P3) separated by creases and arranged in succession with respect to an extension longitudinally orientated axes (A1-Y), in which said first panel (A1-P1) has closing flaps (A1-P1sx, A1-P1dx) arranged at its transversally opposed sides; in which said second panel (A1-P2) has closing flaps (A1-P2sx, A1-P2dx) arranged at its transversally opposed sides; in which said third panel (A1-P3) has closing flaps (A1-P3-sx, A1-P3-dx) arranged at its transversally opposed sides, **characterized by the fact that** the blank-cover (A1) is translated along the aforementioned second translation path (P2) with its extension axes (A1-Y) normally orientated with respect to the same second translation path (P2), **by the fact that** the blank-cover (A1) is arranged along a first segment (P2-ab) of the second translation path (P2) with its second panel (A1-P2) in a vertical alignment above the top face of the product (P), and **by the fact that** the blank-cover (A1) is moving downstream along the second segment (P2-bc) of the second translation path (P2) maintaining the vertical alignment between the second panel (A1-P2) and the top face of the product (P) and the following operations are executed: **a)**-the closing flaps (A1-P1 sx, A1-P1 dx) of the first panel (A1-P1) and the closing flaps (A1-P3sx, A-P3dx) of the third panel (A1-P3) of the blank-cover (A1) are folded downwards; **b)**-the first panel (A1-P1) and the third panel (A1-P3) of the blank-cover (A1) are folded downwards against the respective laterally opposed faces of the product (P); **c)**-the closing flaps (A-P2sx, A-P2dx) of the second panel (A-P2) are folded downwards and against the closing flaps (A-P1sx, A-P3sx, A-P1dx, A-P3dx) of the first (A1-P1) and third (A1-P3) panels.

20. Method according to claim 19, **characterized by the fact that** before the operation c) glue (9-C2dx, 9-C1dx, 9-C2sx, 9-C1sx) is applied on the external sides of the closing flaps (A1-P1 sx, A1-P1 dx, A1-P3sx, A1-P3dx) of the first panel (A1-P1) and of the third panel (A1-P3).

Fig. 1

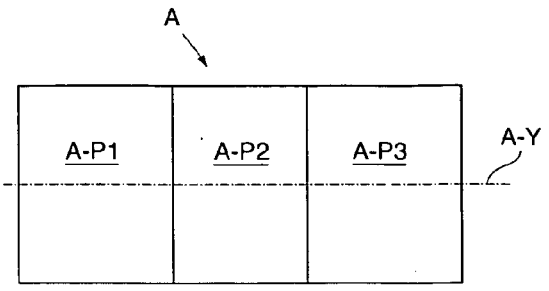


Fig. 2

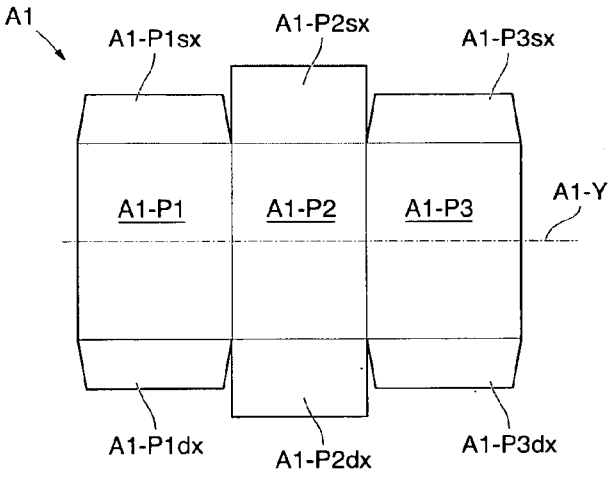
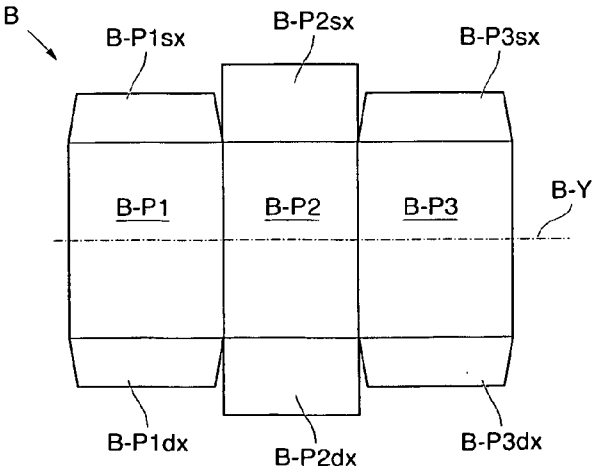
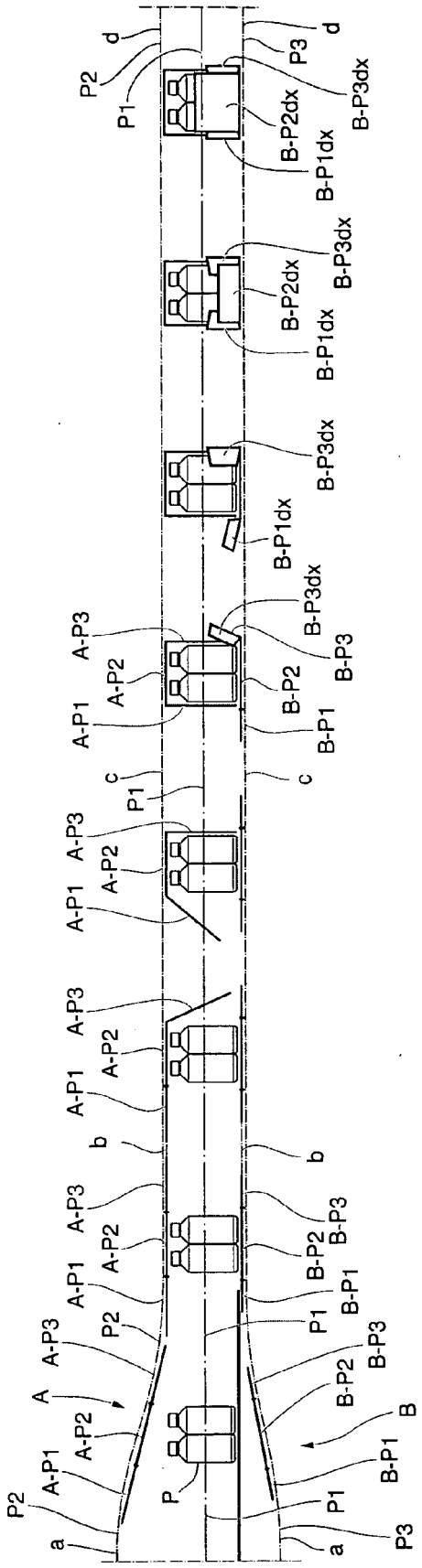


Fig. 3

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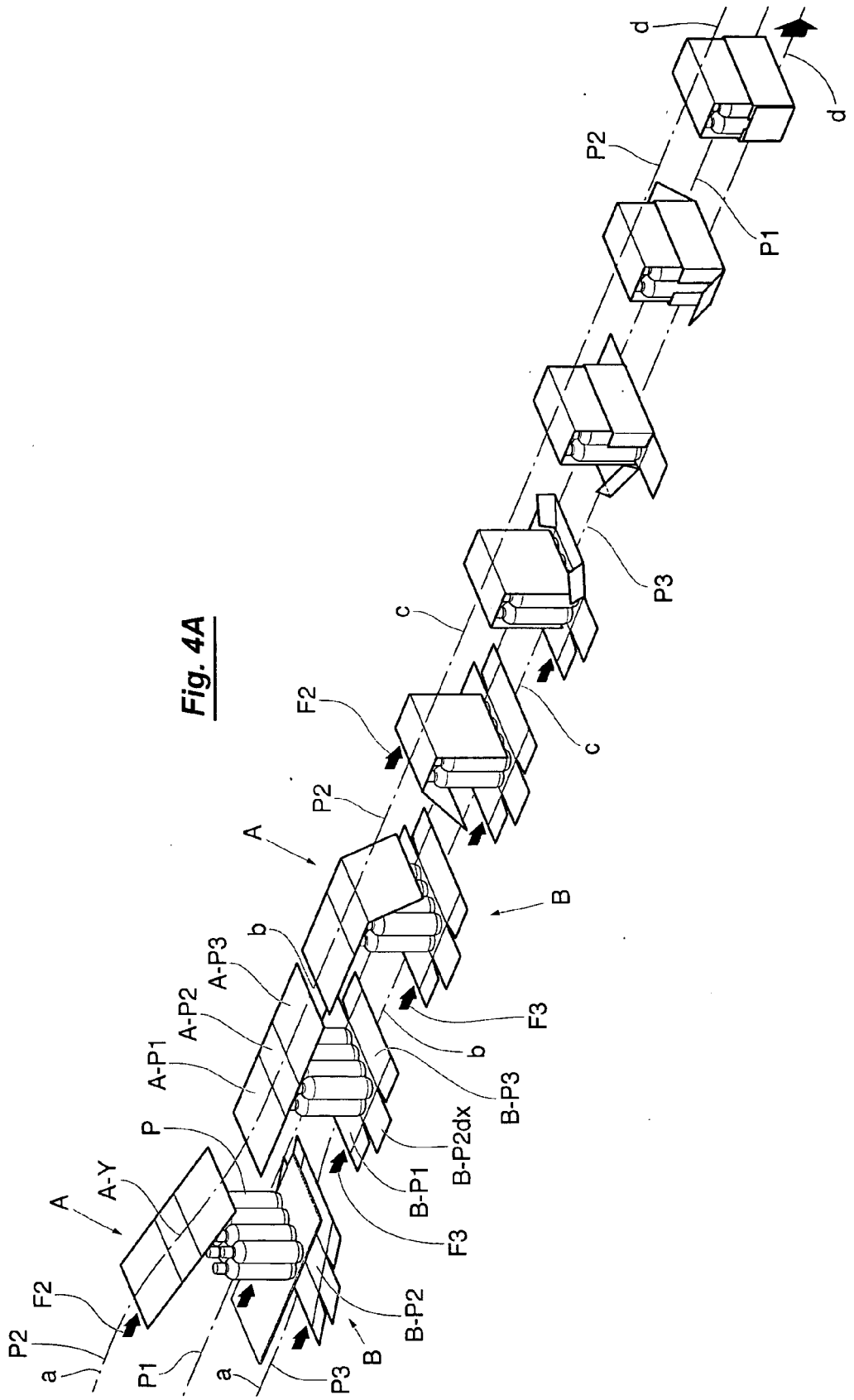
P1
P3
d
B-P3dx
B-P2dx
B-P1dx
B-P3dx
B-P2dx
B-P1dx
B-P3dx
B-P1dx
B-P3dx
A-P3
A-P2
A-P1
B-P3
B-P2
B-P1
c
P1
c
A-P3
A-P2
A-P1
A-P3
A-P2
A-P1
b
b
A-P3
A-P2
A-P1
B-P3
B-P2
B-P1
P2
P1
A-P3
B-P3
A
B-P2
B
A-P2
A-P1
B-P1
P
P2
P1
P3
a
a

Fig. 4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P1
P3
c
c
F2
P2
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B
b
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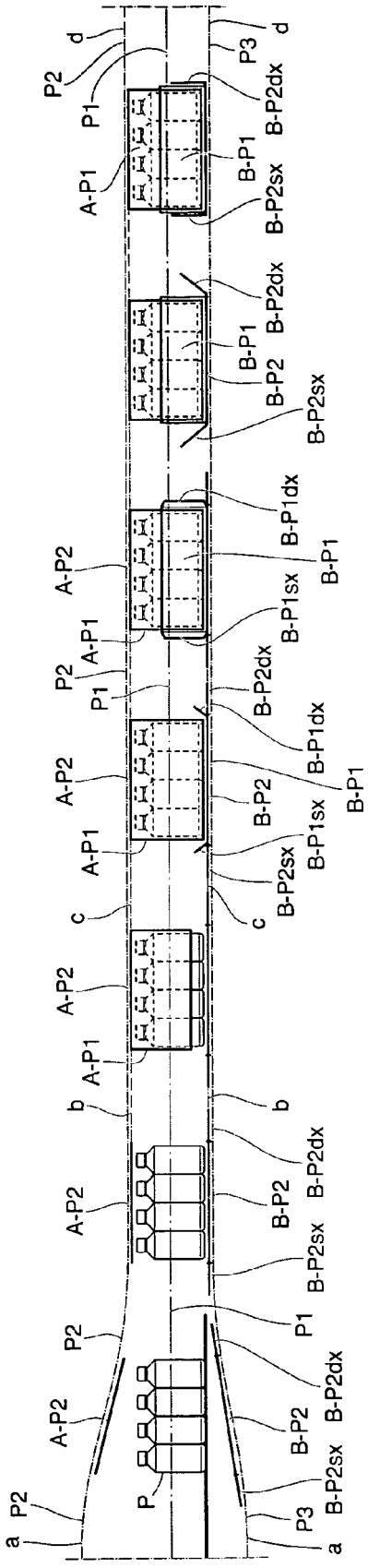
F2
P2
a
P1
a
P3
B
B-P2
F3
B-P1
B-P2dx
B-P3
b
F3

Fig. 4A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P3
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B-P2sx
B-P1dx
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B-P1
B-P1sx
A-P1
P2
P1
B-P2dx
B-P1dx
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B-P2
B-P1
B-P1sx
A-P1
B-P2sx
c
c
A-P2
A-P1
b
b
B-P2dx
A-P2
B-P2
B-P2sx
P1
P2
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A-P2
B-P2
P
B-P2sx
P2
P3
a
a

Fig. 5

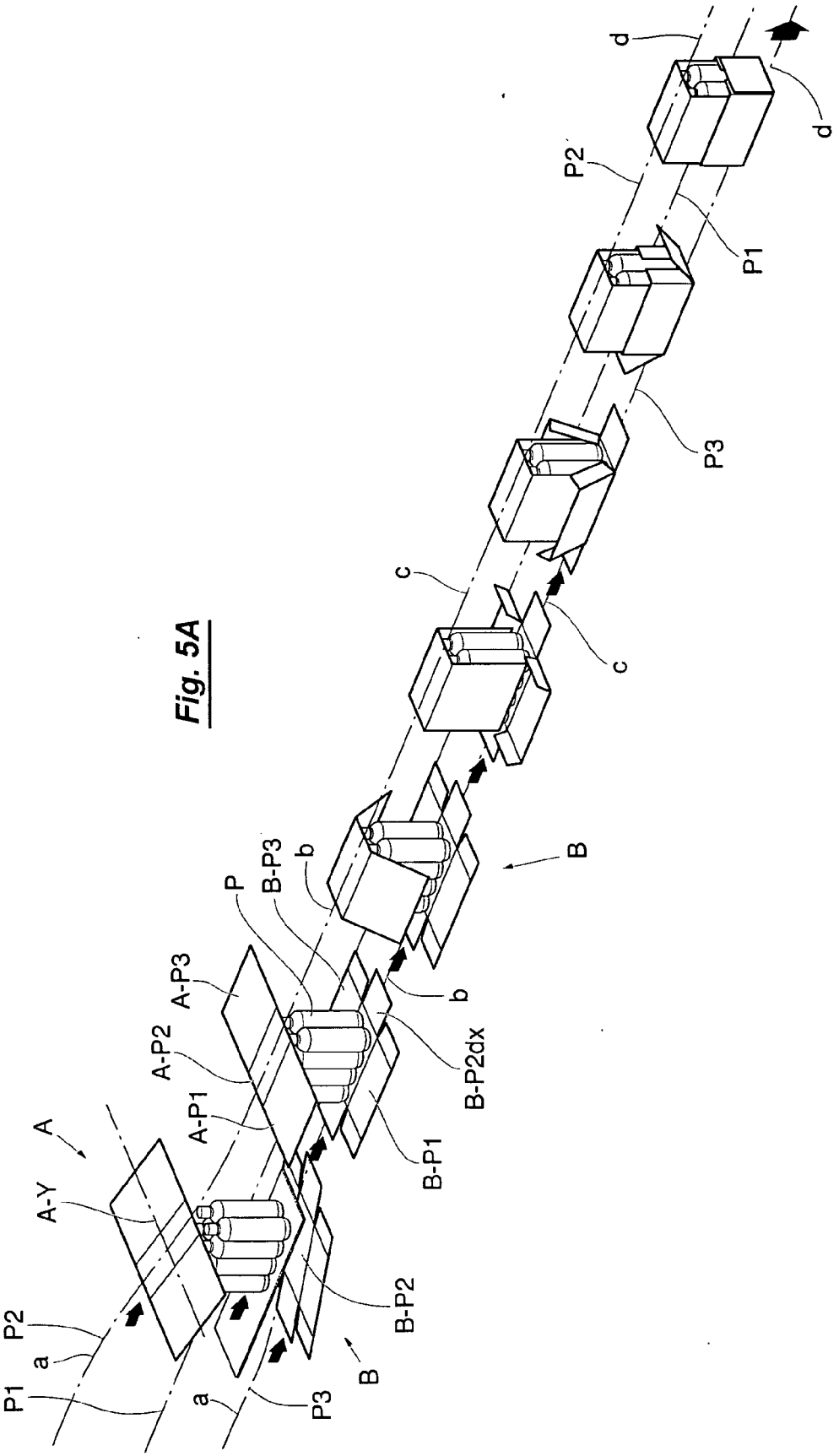
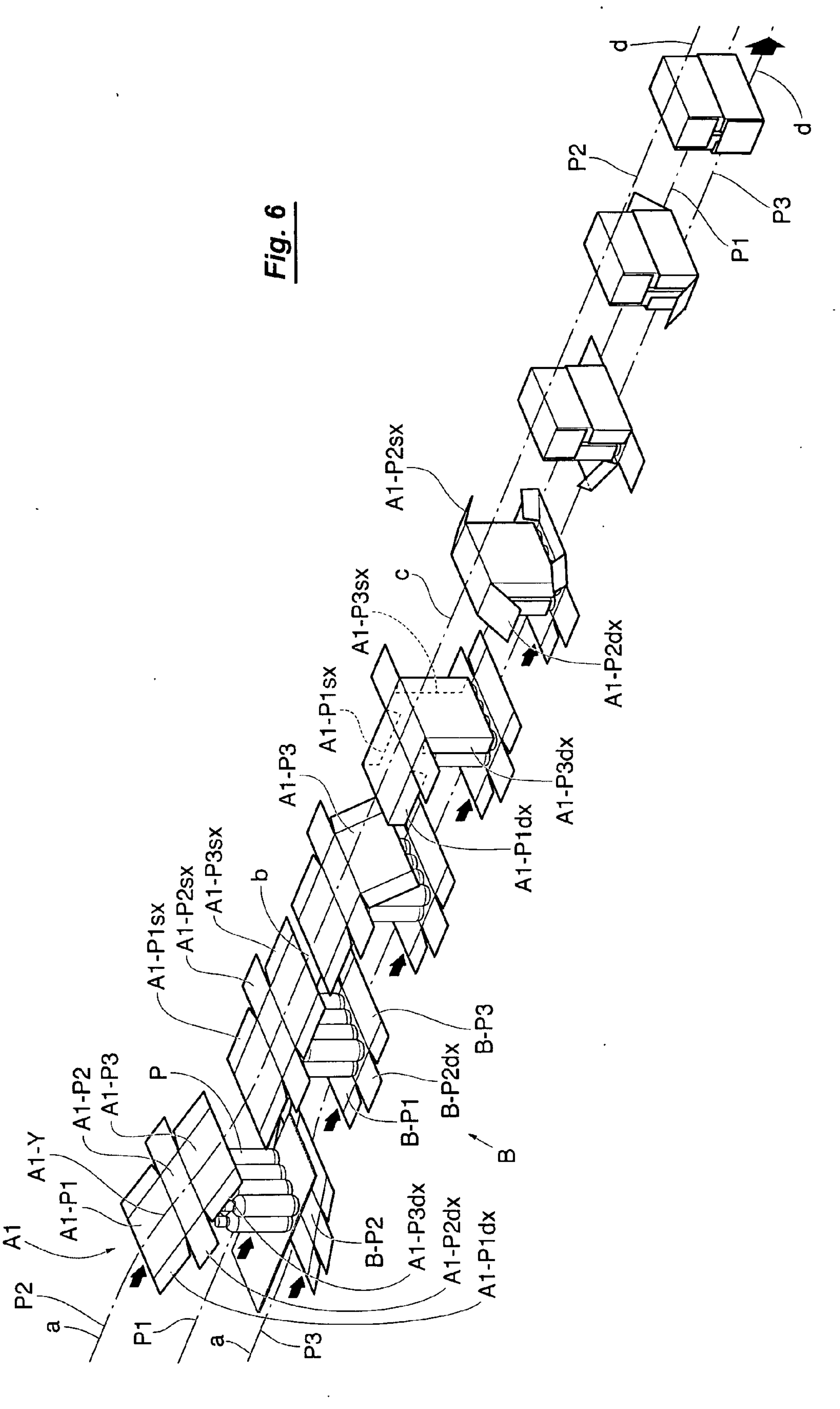


Fig. 5A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d
P2
P3
P1
A1-P2sx
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A1-P2dx
A1-P1sx
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A1-P1dx
b
A1-P3sx
A1-P2sx
A1-P1sx
B-P3
B-P2dx
B-P1
B
P
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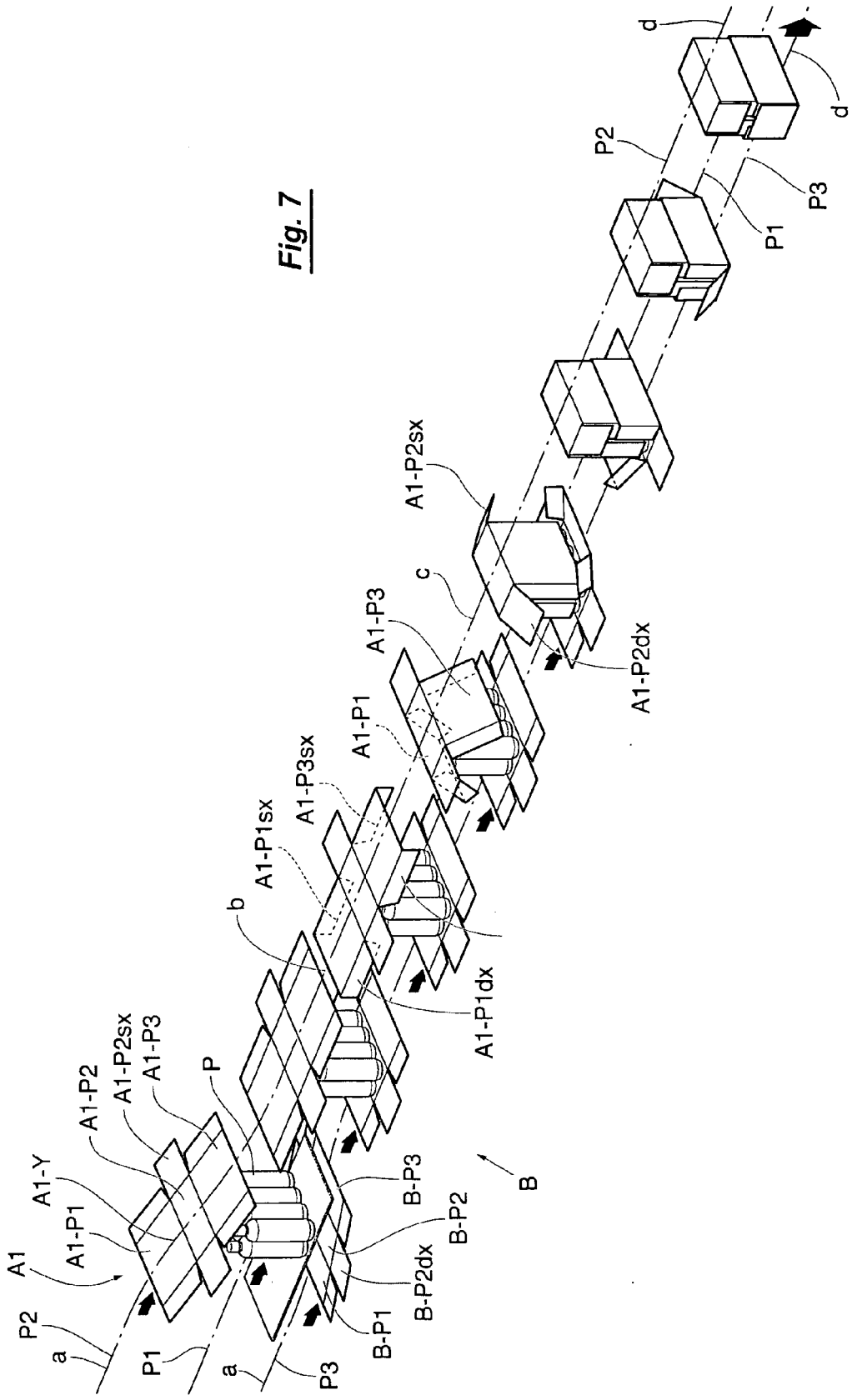
A1-P2
A1-Y
A1-P1
A1
P2
a
P1
a
P3
B-P2
A1-P3dx
A1-P2dx
A1-P1dx

Fig. 6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A1-P2
A1-P2sx
A1-P3
P
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A1-P3sx
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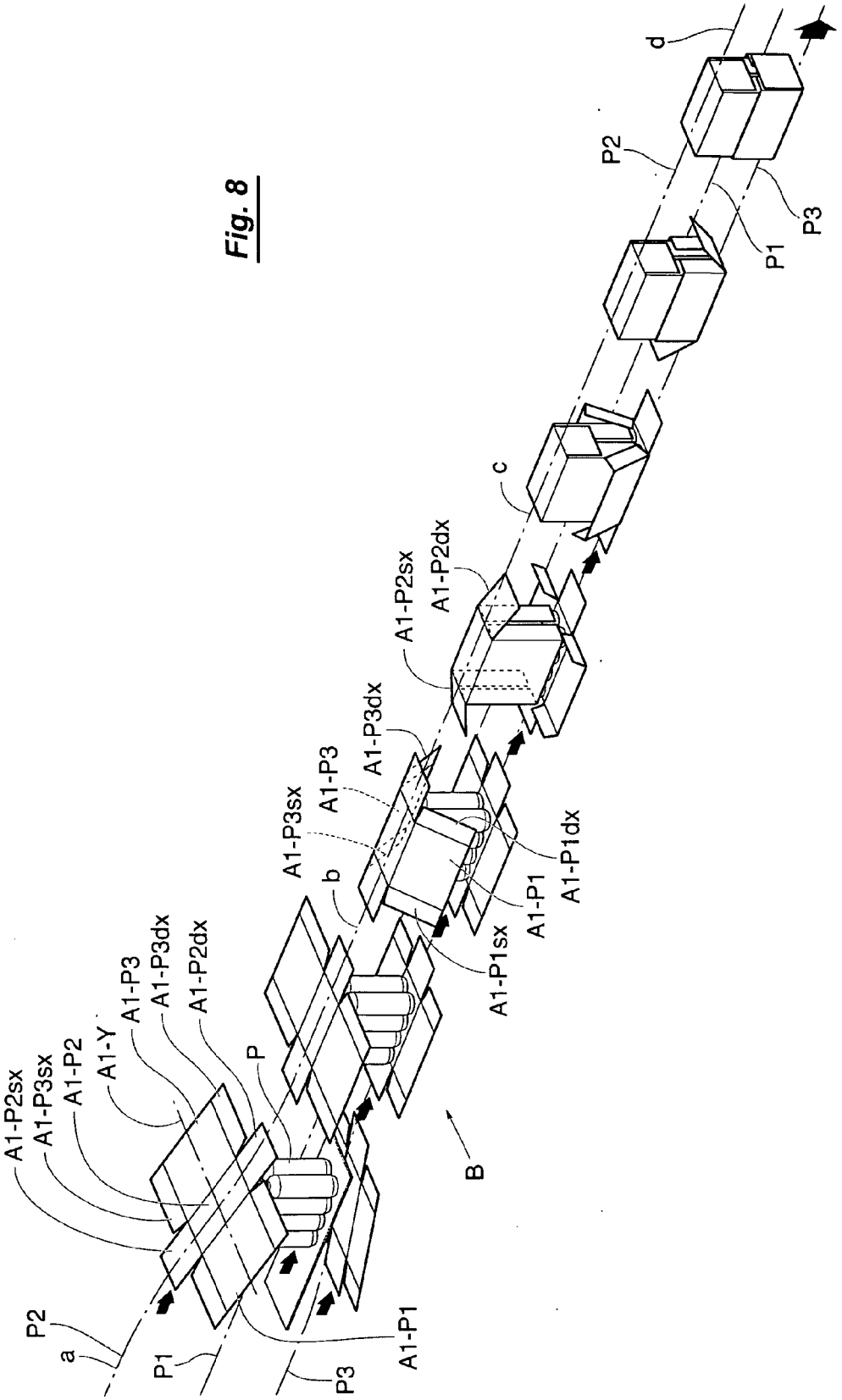
A1-P2dx
A1-P1dx
B
B-P3
B-P2
B-P2dx
B-P1
P2
P1
P3
a
b
c
d

Fig. 7

Fig. 8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A1-P3sx
A1-P2
A1-Y
A1-P3
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A1-P2dx
P
A1-P3sx
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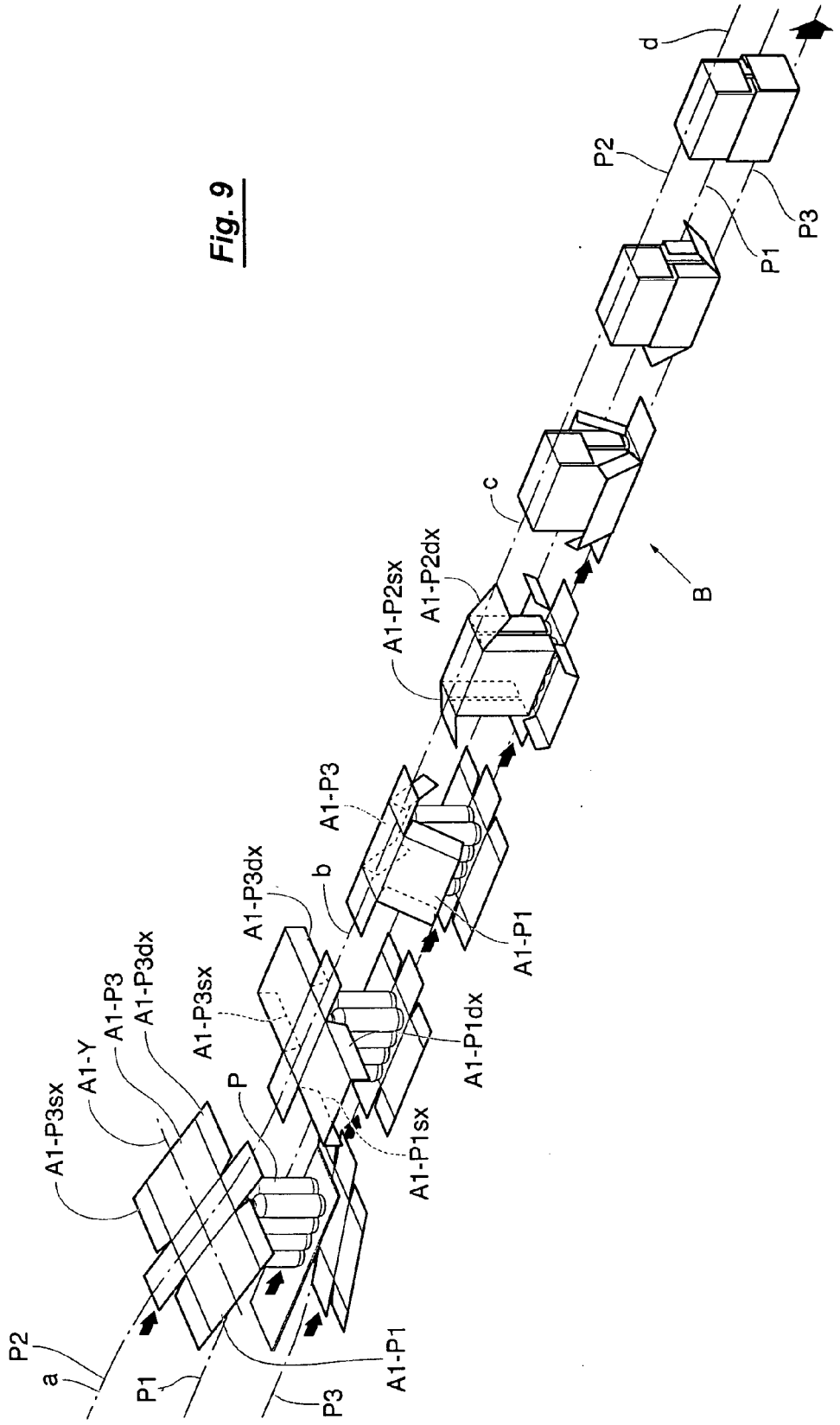
A1-P3dx
A1-P2sx
A1-P2dx
a
b
c
d
P1
P2
P3
A1-P1
A1-P1sx
A1-P1
A1-P1dx
B

Fig. 9


d
P2
P3
P1
c
B
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A1-P3
b
A1-P3dx
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A1-P3sx
A1-P1dx
P
A1-P3
A1-P3dx
A1-Y
A1-P3sx
A1-P1sx
P2
a
P1
P3
A1-P1