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(54) **PACKAGING BAG WITH ZIPLOCK**

(57) Disclosed is a packaging bag with ziplock, including a first bag sheet and a second bag sheet, both sides of the first bag sheet and both sides of the second bag sheet being provided with a connecting end, and the connecting end of the first bag sheet being connected to the connecting end of the second bag sheet so as to form a containing cavity for loading items; a first ziplock assembly, provided on a first end face of the first bag sheet, the first end face of the first bag sheet being provided opposite to a second end face of the second bag sheet; and a second ziplock assembly, provided on the second end face of the second bag sheet. The packaging bag with ziplock employs a secure closure system that allows repeated use without the need for adhesive, enhancing cost-effectiveness while maintaining a high level of sealing integrity.

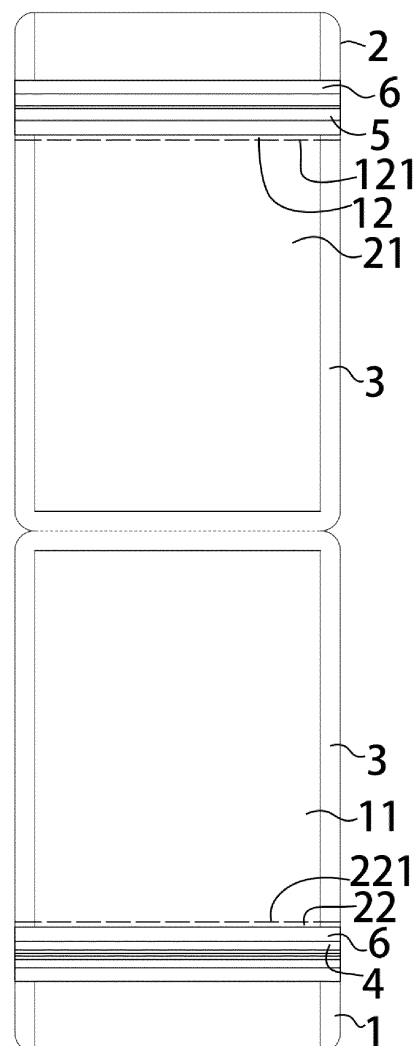


FIG. 1

Description

TECHNICAL FIELD

[0001] This present application relates to the technical field of packaging bag products, in particular relates to a packaging bag with ziplock.

BACKGROUND

[0002] At present, the use of domestic express packaging bags in China grows with each passing day, and many of the bags are by way of adhesive to seal the opening of the bag. However, for this use of adhesive for sealing the packaging bags, in the use of a longer period of time, the adhesive viscosity of the adhesive is prone to failure, which will lead to the opening of the packaging bag can not be securely sealed, and need to be coated with adhesive again in order to be sealed, thus increasing the cost of the use of the packaging bag.

SUMMARY

[0003] In order to overcome the shortcomings of existing technical solutions, the embodiment of the present application provides a packaging bag with ziplock.

[0004] The technical solution adopted in the present application to solve the above-mentioned technical problem is:

A packaging bag with ziplock, includes:

a first bag sheet and a second bag sheet, both sides of the first bag sheet and both sides of the second bag sheet being provided with a connecting end, and the connecting end of the first bag sheet being provided opposite to the connecting end of the second bag sheet and being connected to the connecting end of the second bag sheet so as to form a containing cavity for loading items;

a first ziplock assembly, provided on a first end face of the first bag sheet, the first end face of the first bag sheet being provided opposite to a second end face of the second bag sheet; and

a second ziplock assembly, provided on the second end face of the second bag sheet;

when the first ziplock assembly is fastened to the second ziplock assembly, an opening in communication with the containing cavity is sealed; and

when the first ziplock assembly is disengaged from the second ziplock assembly, the sealed opening is opened.

[0005] As a preferred technical solution in the present application, the second ziplock assembly includes a first

connecting piece and a locking portion; the first connecting piece is provided on the first end face of the first bag sheet and extends along two ends of the first end face; and

the locking portion is provided on the first connecting piece.

[0006] As a preferred technical solution in the present application, the locking portion includes a first locking portion and a second locking portion, one end of the first locking portion being disposed opposite to and separated from one end of the second locking portion by a predetermined distance so as to form a locking cavity for securing the first ziplock assembly.

[0007] As a preferred technical solution in the present application, the first locking portion and the second locking portion are both provided with a locking element, and the locking element of the first locking portion and the locking element of the second locking portion both extend at least partially toward the locking cavity;

when the first ziplock assembly is embedded in the locking cavity, the first ziplock assembly is secured by means of the locking element of the first locking portion and the locking element of the second locking portion.

[0008] As a preferred technical solution in the present application, the locking element of the first locking portion and the locking element of the second locking portion are both made of an elastic material.

[0009] As a preferred technical solution in the present application, the first ziplock assembly includes a second connecting piece and a fastening portion; the second connecting piece is provided on the second end face of the second bag sheet and extends along two ends of the first end face; and

the fastening portion is provided on the second connecting piece.

[0010] As a preferred technical solution in the present application, the fastening portion is equipped with a first raised area and a second raised area, and a first end of the first raised area is connected to a first end of the second raised area.

[0011] As a preferred technical solution in the present application, the first end face of the first bag sheet and the second end face of the second bag sheet are both provided with an adhesive layer; the adhesive layer of the first end face is provided opposite to the adhesive layer of the second end face;

the first connecting piece is provided on the adhesive layer of the first end face and the second connecting piece is provided on the adhesive layer of the second end face.

[0012] As a preferred technical solution in the present application, the outer diameter of the first bag sheet matches that of the second bag sheet.

[0013] As a preferred technical solution in the present application, the first bag sheet includes a first tear-off bag sheet with the first ziplock assembly placed thereon, and a first tear-off line is provided at the juncture of the first tear-off bag sheet with the first bag sheet;

the second bag sheet includes a second tear-off bag sheet with the second ziplock assembly placed thereon, and a second tear-off line is provided at the juncture of the second tear-off bag sheet with the second bag sheet.

[0014] As a preferred technical solution in the present application, both of the first bag sheet and the second bag sheet are constructed from paper.

[0015] Compared with the existing technology, the beneficial effects of the present application are as follows:

The first bag sheet and the second bag sheet can be connected together by a ziplock so as to seal the opening. When it is necessary to open the opening of the bag, it is only necessary to separate the first bag sheet and the second bag sheet. The packaging bag with ziplock can be used many times, and has relatively high sealing, and there is no need to apply adhesive to the opening of the bag to seal the opening, which reduces the cost of using the bag.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] In order to more clearly illustrate the embodiments of the present application, the drawings used in the embodiments will be briefly described below. Obviously, the drawings in the following description are merely some embodiments of the present application, and other drawings may be obtained by those skilled in the art without any creative work.

FIG. 1 is a structural diagram of an embodiment of the present application in which a first bag sheet is separated from a second bag sheet; and

FIG. 2 is a structural diagram of a second ziplock assembly and a first ziplock assembly of an embodiment of the present application.

[0017] Reference numerals in the drawings:

1, a first bag sheet; 11, a first end face; 12, a first tear-off bag sheet; 121, a first tear-off line; 2, a second bag sheet; 21, a second end face; 22, a second tear-off bag sheet; 221, a second tear-off line; 3, a connecting end; 4, a second ziplock assembly; 41, a first connecting piece; 42, a locking portion; 421, a first locking portion; 422, a second locking portion; 423, a locking element; 43, a locking cavity; 5, a first ziplock assembly; 51, a second connecting piece; 52, a fastening portion; 521, a first raised area; 522, a second raised area; 6, an adhesive layer.

DETAILED DESCRIPTION

[0018] The technical solutions in the embodiments of the present application will be clearly and completely described below with reference to the accompanying drawings of the embodiments of the application. It is apparent that the embodiments to be described below are merely

a part of the embodiments of the present application, and not all of them. All other embodiments obtained by those skilled in the art based on the embodiments of the present application without creative efforts are within the scope of the present application.

[0019] It should be understood that, when used in this specification and the appended claims, the terms "include" and "comprise" indicate the presence of the described features, integers, steps, operations, elements and/or components, but do not preclude the presence or addition of a plurality of other features, integers, steps, operations, elements, components, and/or collections thereof.

[0020] It should also be understood that, the terms used in the specification of the present application are only for descriptive purpose and are not intended to limit the present application. As used in the embodiment of the present application and in the appended claims, the singular forms "a", "an" and "the" are intended to include the plural forms unless the context clearly indicate otherwise.

[0021] It should be further understood that the term "and/or" used in the specification of the present application and the appended claims refers to any combination and all possible appended claims refers to any combination and all possible combination of one or more the associated items listed, and includes these combinations.

[0022] The present application provides a packaging bag with ziplock, including a first bag sheet 1 and a second bag sheet 2, both of which are connected together by ziplock so as to seal the opening of the packaging bag. When it is necessary to open the opening of the packaging bag, it is only necessary to separate the first bag sheet 1 from the second bag sheet 2. The packaging bag with ziplock can be used multiple times without the need to apply adhesive in the opening of the bag to seal the opening.

[0023] As shown in FIG. 1 and FIG. 2, the specific structure of the packaging bag with ziplock in this embodiment, including: a first bag sheet 1, a second bag sheet 2 and a ziplock mechanism which includes a first first ziplock assembly 5 and a second first ziplock assembly 4. In this embodiment, both of the first bag sheet and the second bag sheet are constructed from paper, ensuring a sustainable and eco-friendly packaging solution. Each bag sheet has connecting ends to form a cavity for item storage. Furthermore, the packaging bag is equipped with a ziplock mechanism which replaces the previous snap-in and locking mechanisms. The ziplock mechanism ensures that the bag's opening can be easily sealed and reopened multiple times, eliminating the need for adhesives or tape.

[0024] In this embodiment, both ends of the first bag sheet 1 and both ends of the second bag sheet 2 are provided with a connecting end 3, and the connecting end 3 of the first bag sheet 1 and the connecting end 3 of the second bag sheet 2 are connected together with each other. Specifically, adhesive can be chosen to be

coated on the connecting end 3 of the first bag sheet 1 and the connecting end 3 of the second bag sheet 2, then the connecting end 3 of the first bag sheet 1 is provided opposite to the connecting end 3 of the second bag sheet 2 and is connected to the connecting end 3 of the second bag sheet 2. The connecting end 3 of the second bag sheet 2 is connected to the connecting end 3 of the second bag sheet 2, thus forming a containing cavity for loading items, and the connecting end 3 of the first bag sheet 1 and the connecting end 3 of the second bag sheet 2 are set opposite to each other in terms of outer diameter and position, so as to make the first bag sheet 1 and the second bag sheet 2 connected to each other. When storing an item temporarily, the item is simply placed into the containing cavity through the opening between the first bag sheet 1 and the second bag sheet 2.

[0025] In this embodiment, the first ziplock assembly 5 is provided on a first end face 11 of the first bag sheet 1. The first ziplock assembly 5 is specifically provided at an opening on the first end face 11 of the first bag sheet 1, in an upper side position of the first end face 11 of the first bag sheet 1. The first end face 11 of the first bag sheet 1 and a second end face 21 of the second bag sheet 2 are provided opposite to each other, i.e., both the first end face 11 of the first bag sheet 1 and the second end face 21 of the second bag sheet 2 are oriented toward the containing cavity, thus, when the bag's opening is sealed, the first end face 11 of the first bag sheet 1 and the second end face 21 of the second bag sheet 2 may be affixed to each other to store the items temporarily.

[0026] In this embodiment, the second ziplock assembly 4 is provided on the second end face 21 of the second bag sheet 2. The second ziplock assembly 4 is specifically provided at the opening on the second end face 21 of the second bag sheet 2, in an upwardly facing position on the second end face 21 of the first bag sheet 1, and in a position corresponding to the position of the first ziplock assembly 5.

[0027] When the first ziplock assembly 5 is fastened to the second ziplock assembly 4, the bag's opening in communication with the containing cavity is sealed. Specifically, the first ziplock assembly 5 is aligned with the second ziplock assembly 4, and the first ziplock assembly 5 is embedded in the second ziplock assembly 4, and the bag's opening is sealed by snapping the first ziplock assembly 5 to the second ziplock assembly 4.

[0028] When the first ziplock assembly 5 is disengaged from the second ziplock assembly 4, the sealed opening is opened, specifically by pulling the first ziplock assembly 5 out of the second ziplock assembly 4 with force, so that the second ziplock assembly 4 releases its locking action on the first ziplock assembly 5, at which point the opening is opened and the item can be placed into the containing cavity.

[0029] The second ziplock assembly 4 includes a first connecting piece 41 and a locking portion 42, the locking portion 42 being used to lock the first ziplock assembly 5 so that the bag's opening is sealed. The first connecting

piece 41 is provided on the first end face 11 of the first bag sheet 1, the first connecting piece 41 is specifically provided at the bag's opening on the first end face 11 of the first bag sheet 1, and the first connecting piece 41 extends along the two ends of the first end face 11, specifically to a first end and a second end of the first end face 11, so that a length of the two ends of the first connecting piece 41 is the same as that of the two ends of the locking portion 42. The locking portion 42 is provided on the first connecting piece 41, so that after the locking portion 42 locks the first ziplock assembly 5, the bag's opening is almost sealed, and there is no unsealed portion between the first bag sheet 1 and the second bag sheet 2.

[0030] The locking portion 42 includes a first locking portion 421 and a second locking portion 422, one end of the first locking portion 421 being disposed opposite to and separated from the end of the second locking portion 422 by a predetermined distance, which is smaller than the outer diameter of the first ziplock assembly 5, so as to form a locking cavity 43 for securing the first ziplock assembly 5. The locking cavity 43 has a cavity shape that matches the shape of the first ziplock assembly 5. Specifically, the first locking portion 421 and the second locking portion 422 have the same shape, and one end of the first locking portion 421 and one end of the second locking portion 422 extend partially from each other. When the first ziplock assembly 5 is embedded in the locking cavity 43, the first ziplock assembly 5 is secured by the first locking portion 421 and the second locking portion 422, preventing the first ziplock assembly 5 from detaching out of the locking cavity 43 easily without a person pulling out of the first ziplock assembly 5 by force, and enabling the first ziplock assembly 5 to be firmly held in the locking cavity 43 between the first locking portion 421 and the second locking portion 422.

[0031] In addition, the first ziplock assembly 5 will squeeze the first lock portion 421 and the second lock portion 422 when it is embedded in the locking cavity 43 to deform them, so that the first ziplock assembly 5 is completely embedded in the locking cavity 43, and the first lock portion 421 and the second lock portion 422 will automatically return to their original shape after being squeezed and deformed.

[0032] The first locking portion 421 and the second locking portion 422 are both provided with a locking element 423, and the locking element 423 of the first locking portion 421 and the locking element 423 of the second locking portion 422 both extend at least partially in the direction of the locking cavity 43, but the locking element 423 of the first locking portion 421 and the locking element 423 of the second locking portion 422 are not connected with each other, and the two of them are separated from each other by a predetermined distance. The locking element 423 of the first locking portion 421 and the locking element 423 of the second locking portion 422 are in contact with the outer surface of the first ziplock assembly 5 for catching the first ziplock assembly 5 and

preventing the first ziplock assembly 5 from easily disengaging from the locking cavity 43.

[0033] When the first ziplock assembly 5 is embedded in the locking cavity 43, the first ziplock assembly 5 is secured by means of the locking element 423 of the first locking portion 421 and the locking element 423 of the second locking portion 422, specifically by means of the locking element 423 of the first locking portion 421 and the locking element 423 of the second locking portion 422, the first ziplock assembly 5 is prevented from being disengaged outwardly out of the locking cavity 43 unless force is exerted to pull the first ziplock assembly 5 outwardly out of the locking cavity 43.

[0034] The locking element 423 of the first locking portion 421 and the locking element 423 of the second locking portion 422 described above are both made of an elastic material, which is, for example, a thermosetting elastic material or a thermoplastic elastic material (TPE). The thermoplastic elastic material is a polymer material that combines the properties of plastic and rubber, displays the high elasticity of rubber at room temperature, and can be plasticized and molded at high temperatures. The structure of thermoplastic elastomer is characterized by chemical bonding of different resin and rubber segments, with the resin segments forming physical cross-linking points by virtue of inter-chain forces, and the rubber segments being highly elastic chain segments. Therefore, when the first ziplock assembly 5 is embedded in the locking cavity 43, it squeezes the locking element 423 of the first locking portion 421 and the locking element 423 of the second locking portion 422, causing the locking element 423 of the first locking portion 421 and the locking element 423 of the second locking portion 422 to be deformed. When the first ziplock assembly 5 is fully embedded in the locking cavity 43, the locking element 423 of the first locking portion 421 and the locking element 423 of the second locking portion 422 will automatically spring back to restore the original shape.

[0035] The first ziplock assembly 5 includes a second connecting piece 51 and a fastening portion 52. the fastening portion 52 is used to be embedded in the locking cavity 43 such that the opening of the bag is sealed. The second connecting piece 51 is provided on the second end face 21 of the second bag sheet 2, the second connecting piece 51 is specifically provided at the bag's opening on the second end face 21 of the second bag sheet 2, and the second connecting piece 51 extends along the two ends of the second end face 21, specifically to the first end and the second end of the second end face 21, so that the lengths of the two ends of the second connecting piece 51 and the lengths of the two ends of the second end face 21 are both the same. The fastening portion 52 is provided on the second connecting piece 51, so that after the fastening portion 52 is embedded in the locking cavity 43, the bag's opening is almost sealed, and there is no unsealed portion between the first bag sheet 1 and the second bag sheet 2.

[0036] The fastening portion 52 is equipped with a first

raised area 521 and a second raised area 522, and the first raised area 521 and the second raised area 522 are specifically symmetrically provided on the fastening portion 52. A first end of the first raised area 521 is connected to a first end of the second raised area 522, and a second end of the first raised area 521 and a second end of the second raised area 522 extend partially in an opposite direction. According to what is shown in FIG. 2, the first raised area 521 or the second raised area 522 is vertically disposed with the fastening portion 52. When the fastening portion 52 is embedded in the locking cavity 43, the locking element 423 of the first locking portion 421 catches the second end of the first raised area 521, and the locking element 423 of the second locking portion 422 catches the second end of the second raised area 522, so that the entire fastening portion 52 is secured by the locking portion 42.

[0037] The first end face 11 and the second end face 21 are both provided with an adhesive layer 6. The adhesive layer 6 of the first end face 11 is specifically disposed at the bag's opening on the first end face 11, while the adhesive layer 6 of the second end face 21 is also disposed at the bag's opening on the second end face 21. The first connecting piece 41 is provided on the adhesive layer 6 of the first end face 11 and the second connecting piece 51 is provided on the adhesive layer 6 of the second end face 21. The first connecting piece 41 is fixed to the adhesive layer 6 of the first end face 11 and the second connecting piece 51 is fixed to the adhesive layer 6 of the second end face 21 by means of heat treatment. The adhesive layer 6 of the first end face 11 is provided opposite to the adhesive layer 6 of the second end face 21 so that the fastening portion 52 is just embedded in the lock portion 42 when the bag's opening is sealed.

[0038] In addition, the adhesive layer 6 does not take up an excessive amount of area on the first end face 11 or the second end face 21, and when it is subsequently necessary to recycle the bag, it is only necessary to tear off the adhesive layer 6 on the first end face 11 and the adhesive layer 6 on the second end face 21.

[0039] The outer diameter of the first bag sheet 1 matches that of the second bag sheet 2, and specifically the length of the upper and lower ends and the left and right ends of the first bag sheet 1 is the same as the length of the upper and lower ends and the left and right ends of the second bag sheet 2, respectively. Therefore, after the connecting end 3 of the first bag sheet 1 is connected to the connecting end 3 of the second bag sheet 2, there will not be an extra portion of the connecting end 3 of the first bag sheet 1 or the connecting end 3 of the second bag sheet 2 that is not connected to the corresponding connecting end 3.

[0040] The first bag sheet 1 comprises a first tear-off bag sheet 12 with the first ziplock assembly 5 placed thereon, and a first tear-off line 121 is provided at the juncture of the first tear-off bag sheet 12 with the first bag sheet 1. For subsequent recycling of the packaging bag

with ziplock, it is only necessary to separate the first tear-off bag sheet 12 from the first bag sheet 1 along the first tear-off line 121 in order to remove the first tear-off bag sheet 12 so that the first bag sheet 1 can be recycled.

[0041] The second bag sheet 2 comprises a second tear-off bag sheet 22 with the second ziplock assembly 4 placed thereon, and a second tear-off line 221 is provided at the juncture of the second tear-off bag sheet 22 with the second bag sheet 2. For subsequent recycling of the packaging bag with ziplock, it is only necessary to separate the second tear-off bag sheet 22 from the second bag sheet 2 along the second tear-off line 221 to remove the second tear-off bag sheet 22, so that the second bag sheet 2 can be recycled.

[0042] According to the embodiments of the present application, the first bag sheet 1 and the second bag sheet 2 can be connected together by the ziplock, so as to seal the opening. When it is necessary to open the opening of the bag, it is only necessary to separate the first bag sheet 1 and the second bag sheet 2. The packaging bag with ziplock can be used many times, and has relatively high sealing, and there is no need to apply adhesive to the opening of the bag to seal the opening, which reduces the cost of using the bag.

[0043] The above descriptions are merely the detailed embodiments of the present application, but the scope of protection of the present application is not limited thereto. Various equivalent modifications or substitutions may be made by those skilled in the art on the basis of the above-mentioned embodiments of the present application. These modification or substitutions shall fall within the scope of protection of the present application. Therefore, the scope of protection of the present application is defined by the appended claims.

Claims

1. A packaging bag with ziplock, comprising:

a first bag sheet and a second bag sheet, both sides of the first bag sheet and both sides of the second bag sheet being provided with a connecting end, and the connecting end of the first bag sheet being provided opposite to the connecting end of the second bag sheet and being connected to the connecting end of the second bag sheet so as to form a containing cavity for loading items;

a first ziplock assembly, provided on a first end face of the first bag sheet, the first end face of the first bag sheet being provided opposite to a second end face of the second bag sheet; and a second ziplock assembly, provided on the second end face of the second bag sheet;

when the first ziplock assembly is fastened to the second ziplock assembly, an opening in communication with the containing cavity is

sealed; and

when the first ziplock assembly is disengaged from the second ziplock assembly, the sealed opening is opened.

2. The packaging bag with ziplock according to claim 1, wherein: the second ziplock assembly comprises a first connecting piece and a locking portion; the first connecting piece is provided on the first end face of the first bag sheet and extends along two ends of the first end face; and the locking portion is provided on the first connecting piece.
3. The packaging bag with ziplock according to claim 2, wherein: the locking portion comprises a first locking portion and a second locking portion, one end of the first locking portion being disposed opposite to and separated from one end of the second locking portion by a predetermined distance so as to form a locking cavity for securing the first ziplock assembly.
4. The packaging bag with ziplock according to claim 3, wherein: the first locking portion and the second locking portion are both provided with a locking element, and the locking element of the first locking portion and the locking element of the second locking portion both extend at least partially toward the locking cavity; when the first ziplock assembly is embedded in the locking cavity, the first ziplock assembly is secured by means of the locking element of the first locking portion and the locking element of the second locking portion.
5. The packaging bag with ziplock according to claim 4, wherein: the locking element of the first locking portion and the locking element of the second locking portion are both made of an elastic material.
6. The packaging bag with ziplock according to claim 1, wherein: the first ziplock assembly comprises a second connecting piece and a fastening portion; the second connecting piece is provided on the second end face of the second bag sheet and extends along two ends of the first end face; and the fastening portion is provided on the second connecting piece.
7. The packaging bag with ziplock according to claim 6, wherein: the fastening portion is equipped with a first raised area and a second raised area, and a first end of the first raised area is connected to a first end of the second raised area.
8. The packaging bag with ziplock according to claim 6, wherein: the first end face of the first bag sheet and the second end face of the second bag sheet

are both provided with an adhesive layer; the adhesive layer of the first end face is provided opposite to the adhesive layer of the second end face; the first connecting piece is provided on the adhesive layer of the first end face and the second connecting piece is provided on the adhesive layer of the second end face. 5

9. The packaging bag with ziplock according to claim 1, wherein: the outer diameter of the first bag sheet matches that of the second bag sheet. 10

10. The packaging bag with ziplock according to claim 1, wherein: the first bag sheet comprises a first tear-off bag sheet with the first ziplock assembly placed thereon, and a first tear-off line is provided at the juncture of the first tear-off bag sheet with the first bag sheet; 15
the second bag sheet comprises a second tear-off bag sheet with the second ziplock assembly placed thereon, and a second tear-off line is provided at the juncture of the second tear-off bag sheet with the second bag sheet. 20

11. The packaging bag with ziplock according to claim 1, wherein: both of the first bag sheet and the second bag sheet are constructed from paper. 25

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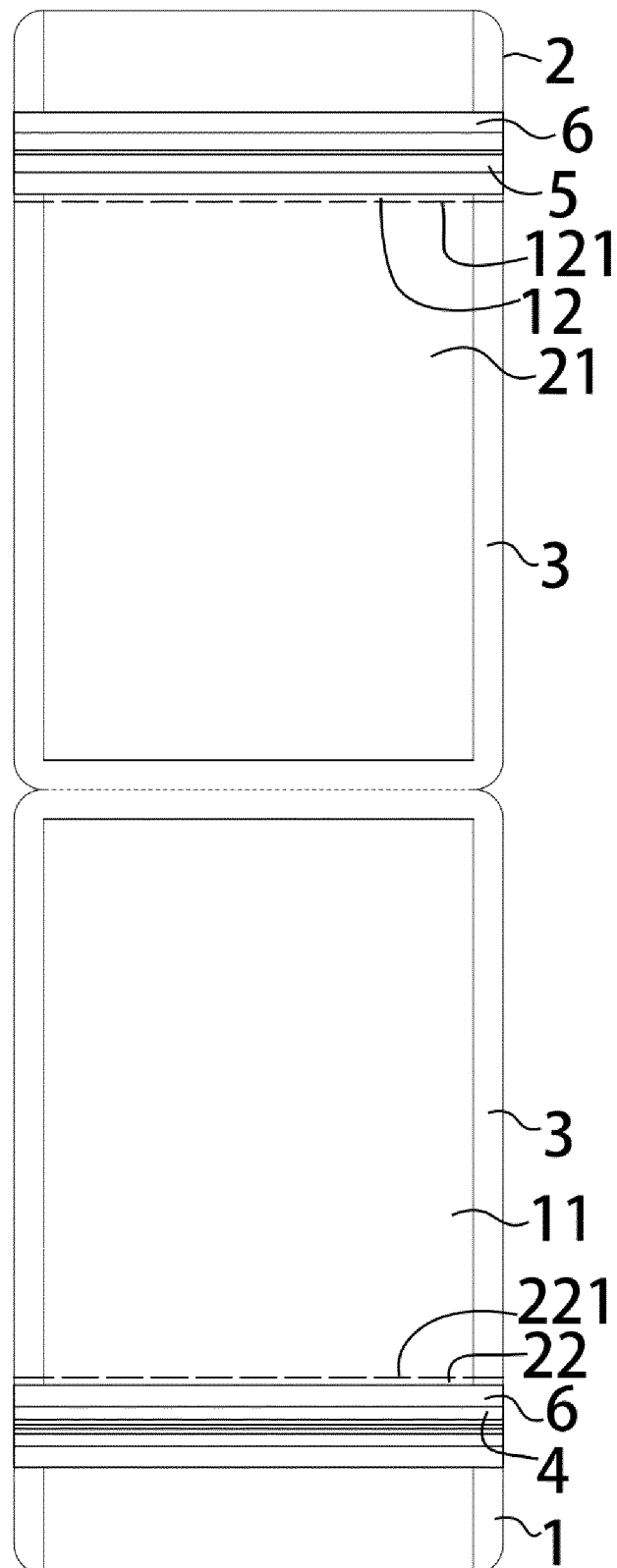


FIG. 1

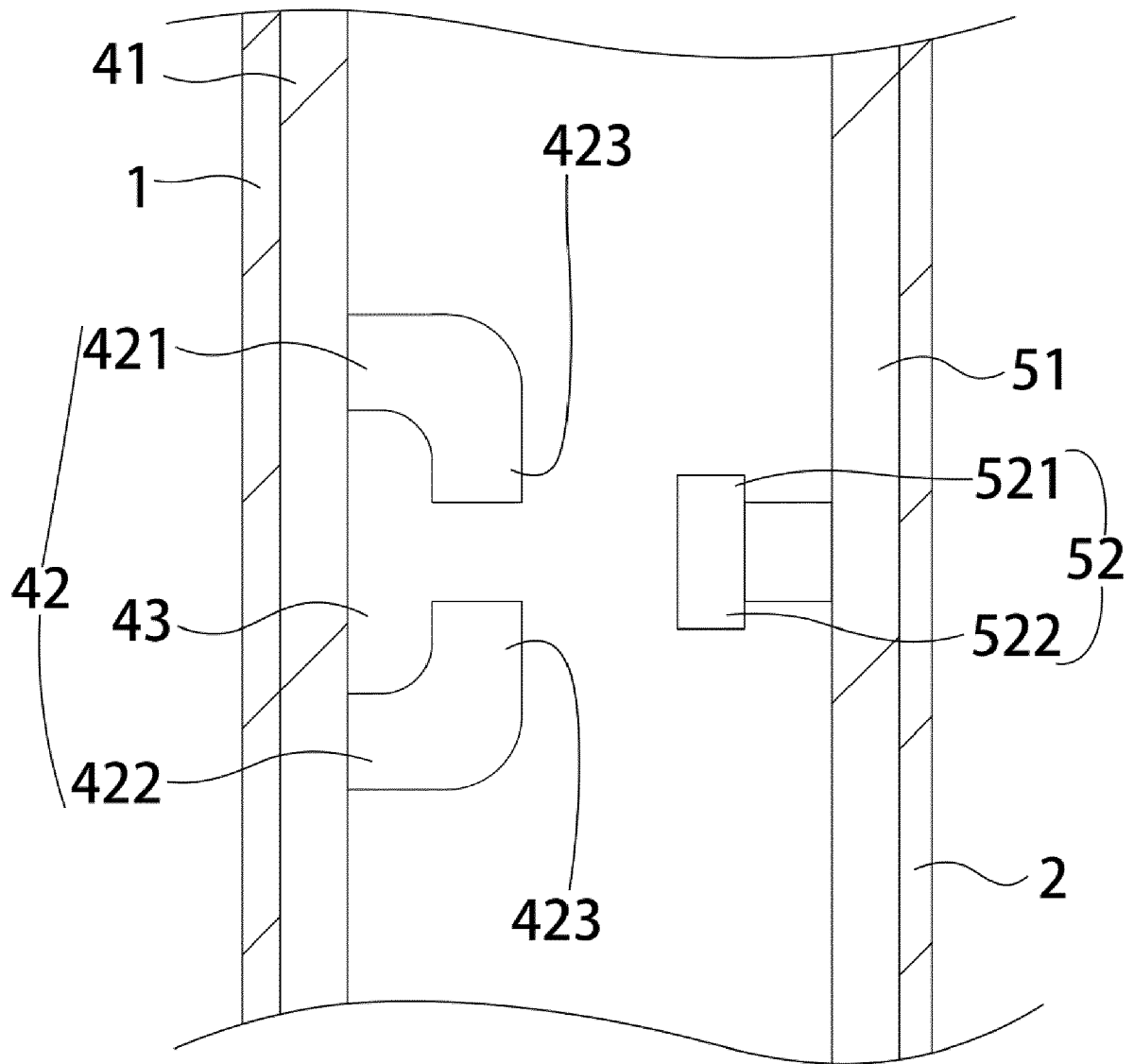


FIG. 2



EUROPEAN SEARCH REPORT

Application Number

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EPO FORM 1503 03.82 (P04C01)

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			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 27 March 2024	Examiner Jervelund, Niels
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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