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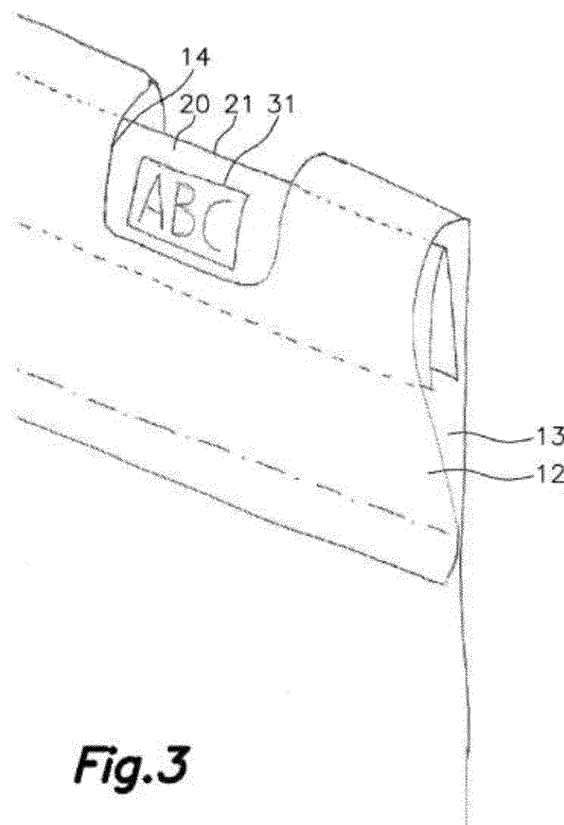
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(54) **PLASTIC BAG WITH SEALING TAPE**

(57) A bag (10) of flexible plastic film, with a mouth-piece (11) and an annular fold (12) containing at least one flexible plastic closure tape (20) folded in half along a folding line (21) parallel to its longer edge, said closing tape (20) being provided, on one of its faces, with first messages (31) arranged in a reading direction (D1) and located in its entirety in one of the two halves of the closing tape (20) delimited by the folding line (21), and of identical second messages (32) arranged in an inverted reading direction (D2) with respect to the reading direction (D1) and located entirely in the other of the two halves of the closure tape (20).



**Fig.3**

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## Description

### Field of the Art

**[0001]** The present invention relates to the field of plastic bags with a closure tape of the type having a tape partially integrated in a conduit or a segments of conduit surrounding the opening of the bag, such that by means of partially extracting the closure tape from inside said conduit or said segments of conduit, the opening of the bag is closed. Advantageously, the plastic bag will be made from recycled plastic.

### State of the Art

**[0002]** Document EP0159309B1 is known and it describes a trash bag provided with messages printed upside down inside the bag around the opening, such that when said bag is placed in a wastepaper basket or trash can and its border folded to secure said bag to the rim of the wastepaper basket or trash can, said message is arranged upright and can be seen from the outside of the bag and from the outside of the wastepaper basket or trash can.

**[0003]** Plastic bags with a closure tape of the type having a fold around their opening provided with a closure tape therein are also known. There are available on the market different models of bags of this type which in some cases have an annular continuous conduit arranged around the opening of the bag, as well as a likewise annular closure tape. In other cases, the conduit is divided into several segments of conduit, each segment having a closure tape with the ends thereof attached to the inner ends of the segment inside which the closure tape is located.

**[0004]** In these known prior art documents, the closure tape is often folded along a folding line parallel to the longest edges of the closure tape, thereby achieving a closure tape that is twice as thick and therefore stronger.

**[0005]** However, arranging messages or other signs or images printed on said closure tapes such that correct reading is assured after folding the closure tape is not known.

### Brief Description of the Invention

**[0006]** The present invention relates to a plastic bag with a closure tape including a bag and at least one closure tape. This bag can be, by way of example, a trash bag.

**[0007]** The bag referred to is of the type formed by one or more flexible plastic films attached to one another defining bag walls, a closed bottom, an upper opening which allows accessing the inside of said bag, and an annular fold attached to the bag walls defining a conduit or several consecutive segments of conduit around the mentioned upper opening, the inside of said conduit or of each of said segments of conduit being accessible through at

least one aperture provided in said fold.

**[0008]** It will be understood that the fold is a region of the bag adjacent to the opening where there is a double wall, for example, by means of folding the wall of the bag outwardly or inwardly, with an end portion of the wall being superimposed on an immediately preceding portion of the wall. The two walls defining the fold will be attached to one another, preferably by means of a welding line parallel to, but spaced apart from, the opening, the two walls not being attached to one another in a region defining a conduit around the opening. Alternatively, said conduit will be divided into several segments of conduit, for example, by means of welding lines transverse to said conduit which disrupt its continuity by dividing it into several contiguous segments of conduit surrounding the opening.

**[0009]** The mentioned closure tape will be formed by a flexible plastic film, said closure tape being folded in the center along a folding line parallel to the longest edge of the closure tape. Said closure tape will be arranged inside the conduit with the ends thereof attached forming a ring around the opening, or inside at least one of the segments of conduit with the ends thereof attached to opposite ends of said segments of conduit, a portion of said closure tape being accessible through said at least one aperture for partially extracting it from inside the conduit or from inside the segments of conduit, causing the closure of the opening.

**[0010]** The present invention proposes for said closure tape to be provided on one of its faces with first messages arranged in a reading direction and entirely located in one of the two halves of the closure tape demarcated by the folding line, and with second messages identical to the first messages but arranged in a reversed reading direction and entirely located in the other one of the two halves of the closure tape demarcated by the folding line.

**[0011]** It will be understood that the messages can be any type of printed information for any purpose, whether written messages, drawings, images, or combinations thereof.

**[0012]** It will also be understood that the reading direction of the first messages is that direction in which a standard reader in a reading position reads a message in a natural and relaxed manner. For example, in texts written in romance, Germanic, or Slavic languages, this reading direction will be horizontal from left to right, whereas in Arabic writing the reading direction is from right to left. Similarly, images and drawings also have a reading direction, as they have a part which must be arranged at the bottom of the image when reading same and a part that must be arranged on top, and which when arranged upside down would make reading and understanding difficult.

**[0013]** The reversed reading direction of the second messages will be the same as the reading direction of the first messages but will require the readers to be in a reversed position with respect to the readers of the first messages for natural and relaxed reading of the second

messages.

**[0014]** For example, a first message can be arranged in a comfortable horizontal reading direction so that a first reader in a first position can, from their perspective, read the first message from left to right, for example, and a second message with a reversed reading direction can also be arranged in a horizontal reading direction, but it will be in a comfortable position so that a second reader in a second position that is reversed with respect to the position of the first reader can also read, from their perspective, the message in the reading direction from left to right.

**[0015]** Therefore, the first reader will correctly see the first message and will see the second message reversed, and vice versa for the second reader.

**[0016]** When the closure tape is folded along the folding line, the first messages and the second messages will be arranged on opposite faces of the folded closure tape, and they can only be seen from opposite sides of the closure tape, and therefore by readers who are facing one another. This assures that, with the bag in a vertical position with its opening at the upper end thereof, a reader who is standing can always see both the first and second messages in a correct reading direction, regardless of their position with respect to the bag.

**[0017]** According to another embodiment of the invention, the walls of the bag and/or of the fold are transparent or translucent, which allows viewing the messages of the closure tape through same. This allows being able to also see the message before closing the bag by means of partially extracting the closure tape from inside the conduit or segments of conduit, for example, with the bag inside a wastepaper basket or trash can and its upper border folded to secure the bag to the mentioned trash can or wastepaper basket.

**[0018]** Alternatively, it is proposed for the first messages and second messages to be arranged in a staggered manner in areas of the closure tape that are not facing one another, so the messages will not coincide with one another when the closure tape is folded along the folding line, which may lead to incorrect viewing if the closure tape has a certain degree of transparency.

**[0019]** Preferably, the reading direction and the reversed reading direction are parallel to the folding line.

**[0020]** According to one embodiment, the bag has two segments of conduit of the same length surrounding the opening, each provided with an aperture in its central portion and with a closure tape of the same length as the corresponding segments of conduit. This embodiment simplifies manufacture as it allows making a welding line on each side of the bag, along the entire length thereof, welding the opposite walls of the bag, and the ends of two closure tapes with the bag, as well as dividing the conduit into two segments of conduit.

**[0021]** Alternatively, it is proposed for the bag to have around the entire opening a conduit of the same perimeter as said opening, provided with two apertures in opposite positions of the fold around the opening, and with

an annular closure tape of the same length as the conduit. This embodiment provides a bag which allows a more versatile closure as it allows the closure tape to slide inside the conduit, facilitating the bag closing and tying operation.

**[0022]** It is also proposed for the closure tape to be arranged inside the segment of conduit, or inside the conduit, positioned such that a first message or a second message is shown through the aperture of the fold, which allows reading same before extracting the closure tape from inside.

**[0023]** It will be understood that references to geometric position, such as for example, parallel, perpendicular, tangent, etc. allow deviations of up to  $\pm 5^\circ$  with respect to the theoretical position defined by said nomenclature.

**[0024]** It will also be understood that the end values of any offered range of values may not be optimal and adaptations of the invention may be required so that said end values are applicable, said adaptations being within reach of one skilled in the art.

**[0025]** Other features of the invention will become apparent in the following detailed description of an embodiment.

#### Brief Description of the Drawings

**[0026]** The foregoing and other advantages and features will be better understood based on the following detailed description of an embodiment in reference to the attached drawings which must be interpreted in an illustrative and non-limiting manner, in which:

Figure 1 shows a perspective view of the proposed bag, with the opening open, in which neither the first nor the second messages have been printed thereon to prevent crowding the image;

Figure 2 shows a perspective view of the bag shown in Figure 1, with the bag full and the opening closed by means of partially extracting the closure tapes through the apertures of the fold, in this figure the messages are not printed either;

Figure 3 shows a sectioned view of the fold of a portion of the bag in a region close to the opening of the fold;

Figure 4 shows a view of a portion of the closure tape arranged flat before folding, the position and reading direction of the first and second messages arranged on one of its faces being shown.

#### Detailed Description of an Embodiment

**[0027]** The attached drawings, referring to an illustrative non-limiting embodiment, refer to a plastic bag with a closure tape.

**[0028]** The embodiment shown consists of a plastic bag provided for holding trash, said bag being obtained by folding a plastic film, superimposing two layers of the film, and heat welding said two layers together in

two parallel, spaced apart welding lines, such that the two layers constitute two bag walls, the folding line constitutes the bottom of the bag, and the space contained between the two bag walls, the bottom of the bag, and the two heat-welding lines constitutes the inner space of the bag 10.

**[0029]** The end of the bag 10 opposite the bottom of the bag forms the opening 11 of the bag 10 which allows accessing the inside thereof. A portion of the bag walls adjacent to said opening 11 is folded, for example towards the outside of the bag 10, forming a fold 12.

**[0030]** The fold 12 is heat welded to the wall of the bag by means of a welding line parallel to and spaced apart from the opening 11 of the bag 10, with there being inside the fold 12 a space forming a conduit 13 around the opening 11 inside which there is arranged a closure tape 20 provided for being able to be at least partially extracted from the conduit 13 through an aperture 14 provided in the fold 12. In the embodiment shown in Figure 1, the opposite ends of the fold are welded with the same welding line attaching the two layers forming the walls of the bag 10, the conduit 13 being divided into two segments 13a of conduit 13, and a closure tape 10 being arranged inside each segment 13a of conduit 13, with the opposite ends thereof also welded along said welding lines dividing the conduit 13.

**[0031]** The partial extraction of the closure tape 20 from inside the segment 13a causes the two welding lines to move closer to the aperture 14 of the fold 12, driven by the closure tape 20, causing the opening 11 to collapse and close.

**[0032]** According to another embodiment, the conduit 13 is a continuous conduit arranged around the opening 11, and the closure tape 20 is also an annular continuous tape, such that the partial extraction of said closure tape 20 through one or more apertures 14 of the fold 12 reduces its length inside the conduit 13, causing the opening 11 to collapse and close.

**[0033]** In any case and according to the principles of this invention, it is proposed for the mentioned closure tape 20 to have first messages 31 and second messages 32 printed on one of its faces.

**[0034]** As shown in Figure 3, it is proposed for the closure tape 20 to be an elongated tape folded in the center along the entire length thereof, along a folding line 21 parallel to longest edges of the closure tape 20. This allows increasing the strength of said closure tape 20.

**[0035]** Figure 4 shows that said first messages 31 are entirely printed on one half of the closure tape 20 arranged on one side of the folding line 21, and these messages are arranged in a reading direction D1; in contrast, the second messages 32 will be printed on the other half of the same face of the closure tape 20 arranged in a reversed reading direction D2 on the other side of the folding line 21.

**[0036]** This allows two facing observers on opposite sides of the closure tape 20 to correctly read the first messages and the second messages when the closure

tape 20 is folded along the folding line 21.

**[0037]** This feature allows including messages in the closure tape 20, always assuring that such messages will be arranged such that they allow comfortable reading.

**[0038]** As seen in Figure 4, it is also proposed for the first messages 31 and the second messages 32 to be arranged in positions of the closure tape 20 that are not facing one another, thereby preventing a possible transparency of the closure tape 20 from hindering the reading of the first or second messages 31 or 32 when the closure tape 20 is folded inside the conduit 13.

**[0039]** It is also proposed for the closure tape 20 to be arranged inside the conduit 13 or the segment 13a, making one of the first messages 31 or second messages 32 coincide with the aperture 14 of the fold 12, allowing the reading thereof before partially extracting the tape.

**[0040]** Additionally, it is proposed for the plastic film forming the bag 10, its walls, or the fold 12 to be translucent or transparent, which thereby allows reading the first and/or second messages 31 and 32 with the closure tape 20 inside the conduit 13 or the segment 13a of conduit 13.

**[0041]** It will be understood that the different parts making up the invention described in an embodiment can be freely combined with parts described in other different embodiments even though said combination has not been explicitly described, provided that the combination does not entail any drawback.

## Claims

1. A plastic bag with a closure tape, including:

a bag (10) formed by one or more flexible plastic films attached to one another defining bag walls, a closed bottom, an upper opening (11) which allows accessing the inside of said bag (10), and an annular fold (12) attached to the bag walls defining a conduit (13) or several consecutive segments (13a) of conduit (13) around the mentioned upper opening (11), the inside of said conduit (13) or of each of said segments (13a) of conduit (13) being accessible through at least one aperture (14) provided in said fold (12); at least one closure tape (20) formed by a flexible plastic film, said closure tape (20) being folded in the center along a folding line (21) parallel to the longest edge of the closure tape (20), said closure tape (20) being arranged inside the conduit (13) with the ends thereof attached forming a ring around the opening (11), or inside at least one of the segments (13a) of conduit (13) with the ends thereof attached to opposite ends of said segment (13a) of conduit (13); a portion of said closure tape (20) being accessible through said at least one aperture (14) for partially extracting it from inside the conduit (13)

or from inside the segment (13a) of conduit (13), causing the closure of the opening (11);

**characterized in that**

said closure tape (20) is provided on one of its faces with first messages (31) arranged in a reading direction (D1) and entirely located in one of the two halves of the closure tape (20) demarcated by the folding line (21), and with second messages (32) identical to the first messages (31) but arranged in a reversed reading direction (D2) with respect to the reading direction (D1) and entirely located in the other one of the two halves of the closure tape (20) demarcated by the folding line (21).

2. The plastic bag according to claim 1, wherein the walls of the bag and/or of the fold (12) are transparent or translucent, which allows viewing the first messages (31) and/or the second messages (32) of the closure tape (20) through same.
3. The plastic bag according to claim 1 or 2, wherein the first messages (31) and the second messages (32) are arranged in a staggered manner in areas of the closure tape (20) that are not facing one another.
4. The plastic bag according to any one of the preceding claims, wherein the reading direction (D1) and the reversed reading direction (D2) are parallel to the folding line (21).
5. The plastic bag according to any one of the preceding claims, wherein the bag (10) has two segments (13a) of conduit (13) of the same length surrounding the opening (11), each provided with an aperture (14) in its central portion and with a closure tape (20) of the same length as the corresponding segment (13a) of conduit (13) in which they are housed.
6. The plastic bag according to any one of preceding claims 1 to 4, wherein the bag (10) has around the opening (11) a conduit (13) of the same perimeter as said opening (11), provided with two apertures (14) in opposite positions of the fold (12) around the opening (11), and with an annular closure tape (20) of the same length as the conduit (13) in which it is housed.
7. The plastic bag according to any one of the preceding claims, wherein the closure tape 20 is arranged inside the segment (13a) of conduit or inside the conduit (13), positioned such that a first message (31) or a second message (32) is shown through the aperture (14) of the fold (12).
8. The plastic bag according to any one of the preceding claims, wherein the material of the bag is recycled plastic.

**Amended claims under Art. 19.1 PCT**

1. A plastic bag with a closure tape, including:

a bag (10) formed by one or more flexible plastic films attached to one another defining bag walls, a closed bottom, an upper opening (11) which allows accessing the inside of said bag (10), and an annular fold (12) attached to the bag walls defining a conduit (13) or several consecutive segments (13a) of conduit (13) around the mentioned upper opening (11), the inside of said conduit (13) or of each of said segments (13a) of conduit (13) being accessible through at least one aperture (14) provided in said fold (12); at least one closure tape (20) formed by a flexible plastic film, said closure tape (20) being provided on one of its faces with first messages (31) arranged in a reading direction (D1), said closure tape (20) being arranged inside the conduit (13) with the ends thereof attached forming a ring around the opening (11), or inside at least one of the segments (13a) of conduit (13) with the ends thereof attached to opposite ends of said segment (13a) of conduit (13); a portion of said closure tape (20) being accessible through said at least one aperture (14) for partially extracting it from inside the conduit (13) or from inside the segment (13a) of conduit (13), causing the closure of the opening (11);

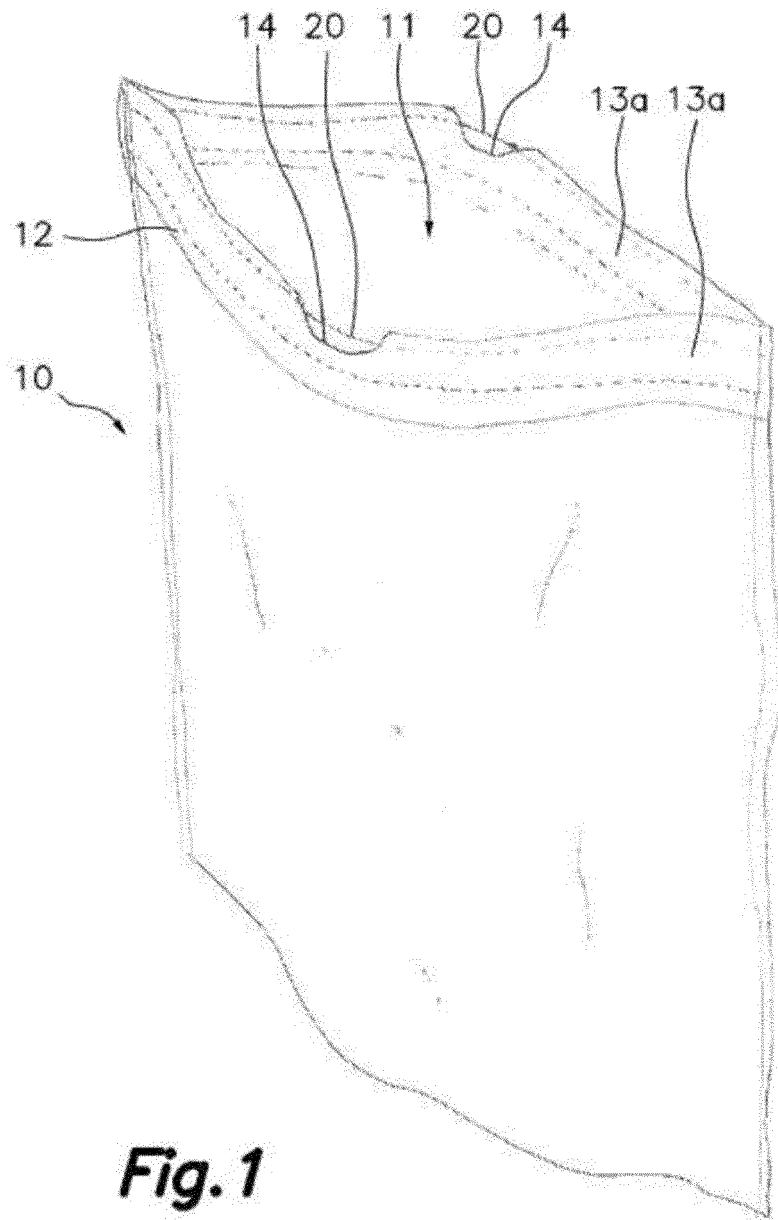
**characterized in that**

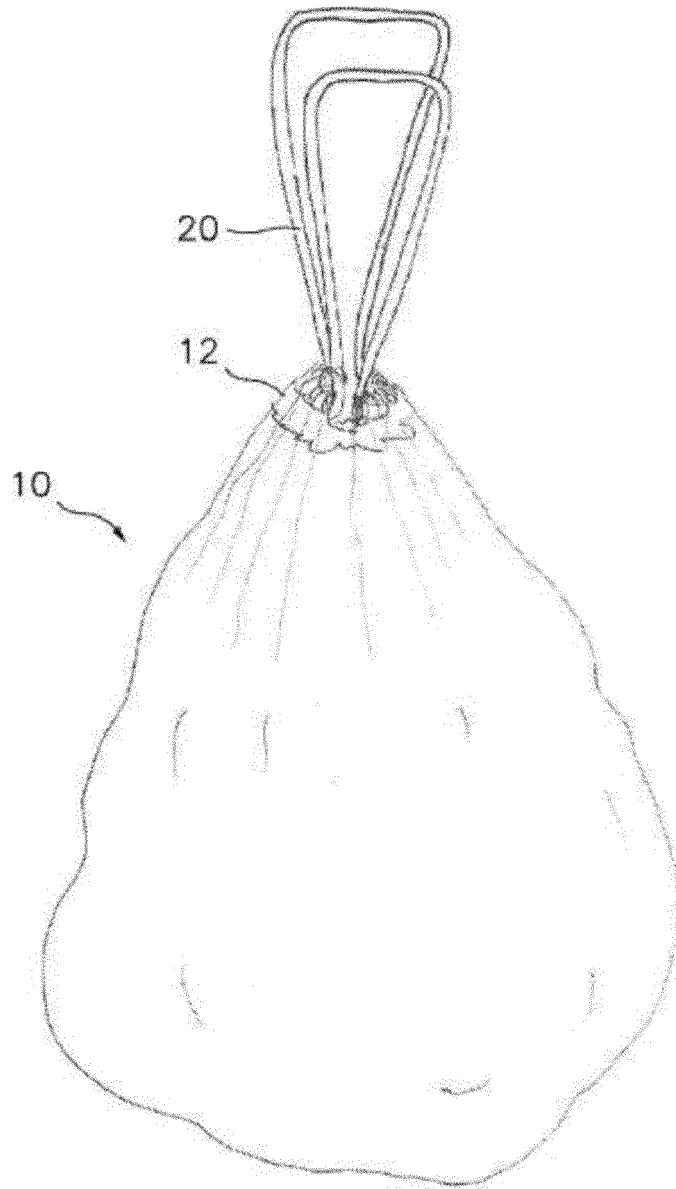
said closure tape (20) is folded in the center along a folding line (21) parallel to the longest edge of the closure tape (20), said first messages (31) are entirely located in one of the two halves of the closure tape (20) demarcated by the folding line (21), and said closure tape (20) is furthermore provided with second messages (32) identical to the first messages (31) but arranged in a reversed reading direction (D2) with respect to the reading direction (D1) and entirely located in the other one of the two halves of the closure tape (20) demarcated by the folding line (21).

2. The plastic bag according to claim 1, wherein the walls of the bag and/or of the fold (12) are transparent or translucent, which allows viewing the first messages (31) and/or the second messages (32) of the closure tape (20) through same.
3. The plastic bag according to claim 1 or 2, wherein the first messages (31) and the second messages (32) are arranged in a staggered manner in areas of the closure tape (20) that are not facing one another.
4. The plastic bag according to any one of the preceding claims, wherein the reading direction (D1) and the

reversed reading direction (D2) are parallel to the folding line (21).

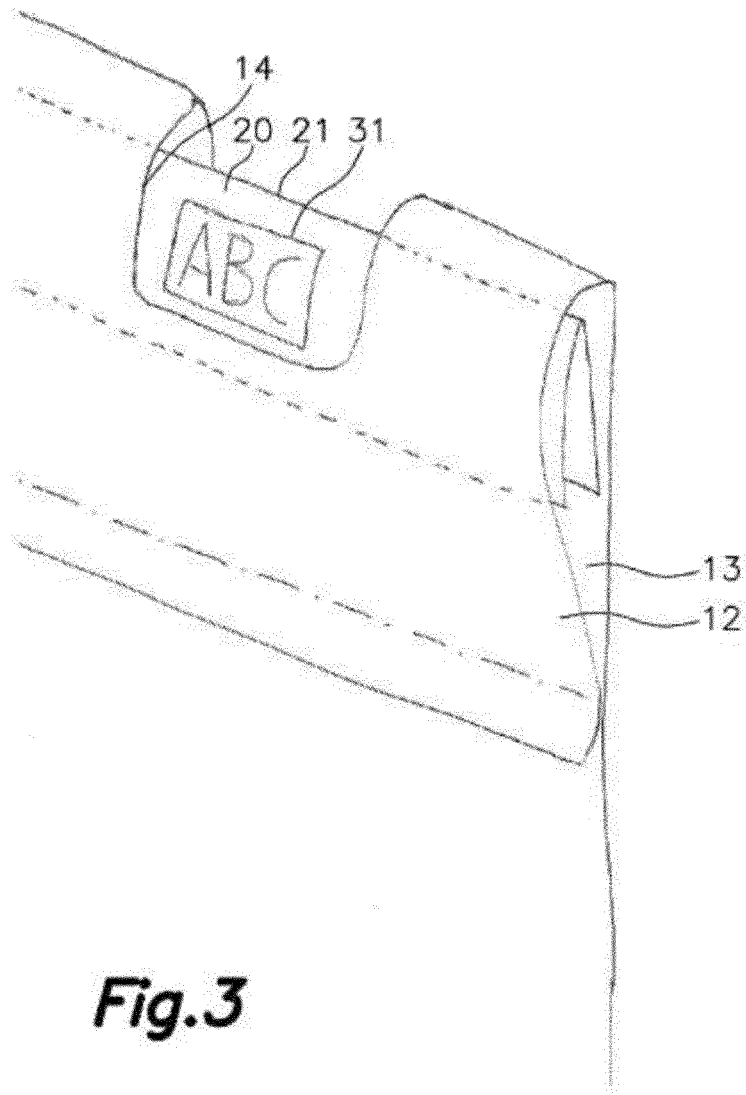
5. The plastic bag according to any one of the preceding claims, wherein the bag (10) has two segments (13a) of conduit (13) of the same length surrounding the opening (11), each provided with an aperture (14) in its central portion and with a closure tape (20) of the same length as the corresponding segment (13a) of conduit (13) in which they are housed.
6. The plastic bag according to any one of preceding claims 1 to 4, wherein the bag (10) has around the opening (11) a conduit (13) of the same perimeter as said opening (11), provided with two apertures (14) in opposite positions of the fold (12) around the opening (11), and with an annular closure tape (20) of the same length as the conduit (13) in which it is housed.
7. The plastic bag according to any one of the preceding claims, wherein the closure tape 20 is arranged inside the segment (13a) of conduit or inside the conduit (13), positioned such that a first message (31) or a second message (32) is shown through the aperture (14) of the fold (12).
8. The plastic bag according to any one of the preceding claims, wherein the material of the bag is recycled plastic.



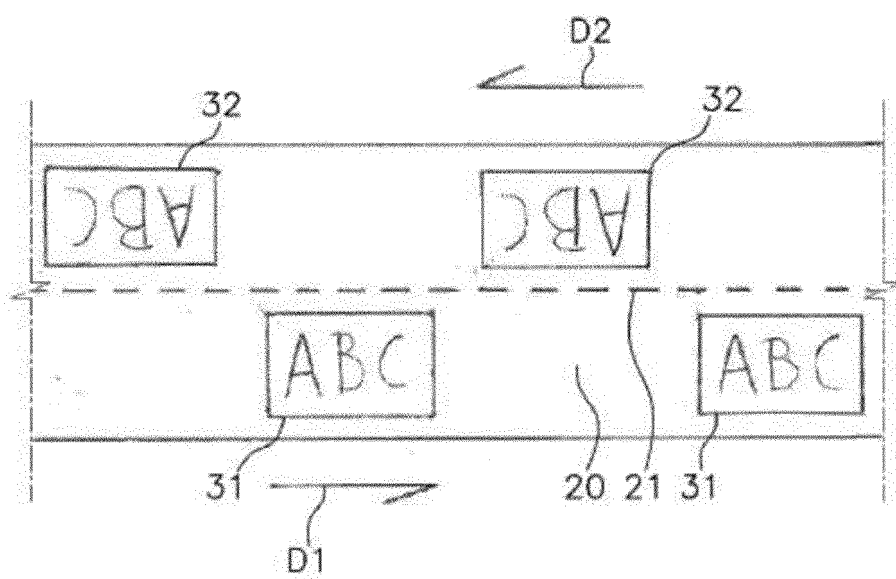


**Fig.2**





**Fig.3**



**Fig.4**

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/ES2017/070816

5	A. CLASSIFICATION OF SUBJECT MATTER		
	<b>B65D33/28</b> (2006.01)		
	According to International Patent Classification (IPC) or to both national classification and IPC		
	B. FIELDS SEARCHED		
10	Minimum documentation searched (classification system followed by classification symbols) <b>B65D</b>		
	Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
15	Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) <b>EPODOC, INVENES</b>		
	C. DOCUMENTS CONSIDERED TO BE RELEVANT		
20	Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	X	US 2010046860 A1 (KENT GREGORY S ET AL.) 25/02/2010, Paragraph 78 and figure 17.	1-8
25	X	US 2010303388 A1 (KENT GREGORY STUART ET AL.) 02/12/2010, Paragraph 45 and figures.	1-8
	X	US 2003072505 A1 (PIHL TODD ET AL.) 17/04/2003, Paragraph 64 and figure 10.	1-8
30	A	BR MU8901996U U2 (DE AZEVEDO PACHECO PAULO) 17/12/2013, Claims and figures.	1, 4
35			
40	<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
45	* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance. "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure use, exhibition, or other means. "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
50	Date of the actual completion of the international search <b>27/04/2018</b>		Date of mailing of the international search report <b>(30/04/2018)</b>
55	Name and mailing address of the ISA/  OFICINA ESPAÑOLA DE PATENTES Y MARCAS Paseo de la Castellana, 75 - 28071 Madrid (España) Facsimile No.: 91 349 53 04		Authorized officer A. Martín Moronta  Telephone No. 91 3495377

Form PCT/ISA/210 (second sheet) (January 2015)

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES2017/070816

Information on patent family members

Patent document cited in the search report	Publication date	Patent family member(s)	Publication date
US2010046860 A1	25.02.2010	USD811239S S USD806559S S USD806560S S US2016046412 A1 US9624004 B2 US2016046411 A1 NZ591251 A CN102177074 A CA2735398 A1 CA2735398 C AU2009285793 A1 AU2009285793B B2 WO2010025149 A1 EP2331417 A1 US9604760 B2	27.02.2018 02.01.2018 02.01.2018 18.02.2016 18.04.2017 18.02.2016 26.07.2013 07.09.2011 04.03.2010 12.09.2017 04.03.2010 18.02.2016 04.03.2010 15.06.2011 28.03.2017
US2010303388 A1	02.12.2010	US2017320634 A1 US2016114939 A1 US2016096660 A1 US9550610 B2 CN102459016 A CA2762979 A1 AU2010254446 A1 WO2010138276 A1	09.11.2017 28.04.2016 07.04.2016 24.01.2017 16.05.2012 02.12.2010 15.12.2011 02.12.2010
US2003072505 A1	17.04.2003	US2004097357 A1	20.05.2004
BRMU8901996U U2	17.12.2013	NONE	

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**REFERENCES CITED IN THE DESCRIPTION**

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**Patent documents cited in the description**

- EP 0159309 B1 [0002]