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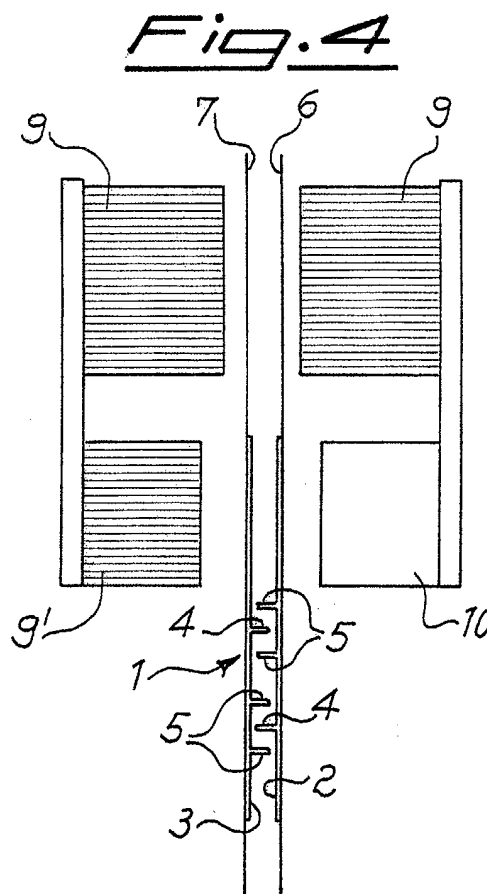
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(54) **Preformed and resealable envelope of plastic material**

(57) An envelope of plastic material (1) comprises a profile (2) being provided with pressure-closing members (4, 5) and sealed in the upper part of a face (6) of the envelope; and a free profile (3) being provided with pressure-closing members (4, 5) to be engaged in closing members of profile (2) and sealable at the upper part of the other inner surface (7) of the envelope after filling of the same.



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Description

[0001] The present invention relates to an envelope of plastic material suitable for being filled with different solid and liquid products, and sealed. As it is known, it is a matter of preformed envelopes made from a roll of plastic film having an open side for the filling and being resealable once the sealing is broken through known plastic pressure profiles. In the field of the filling technique of plastic envelopes, it is known that these comprise internal sides joined together in their upper part wherein the filling takes place, by male and female pressure-closing members, so that the filling of the envelope is accomplished by moving apart said members. This operation has however the drawback that the automatic filling machines encounter serious difficulties in opening the envelopes in the product introducing step.

[0002] As a matter of fact, this opening procedure with the moving apart of said members is hardly solvable but by means of mechanic-pneumatic systems that may even spoil the outer surface of the envelope itself and not correctly work with the discharge of the product.

[0003] The object of the present invention is to eliminate the above mentioned drawbacks, by making an envelope with the new features as described in detail hereafter and illustrated in the attached drawings, wherein:

FIGURES 1 and 2 show respectively the scheme of an envelope of the prior art in the filling and sealing step;

FIGURES 3 and 4 show respectively the scheme of an envelope according to the present invention in the filling and sealing step;

FIGURE 5 shows a vertical sectional view of the upper part of the envelope according to the present invention; and

FIGURE 6 shows a horizontal sectional view along line IV-IV of the envelope of figure 5, in a reduced scale.

[0004] Referring to the schematically shown figures 1 and 2, an envelope 1 according to the prior art, with a closed bottom not shown in the figures, has two profiles 2 and 3 provided with male and female pressure-closing joint members 4 and 5 as arranged on internal sides 6 and 7 in the upper part of the envelope. For filling the product inside the envelope according to arrow A, as it is known, the envelopes, that are closed by said reciprocally engaged members 4 and 5, are opened through mechanic-pneumatic systems such as suction cups or pliers 8 arranged in the automatic filling section. As specified above, with this known system, the automatic filling machines encounter difficulties in opening the envelopes that occur closed with members 4 and 5 engaged each other.

[0005] According to figures 3, 4, 5, 6 of the present invention, in envelope 1 with the internal sides 6 and 7, only profile 2 is sealed to the internal side of the enve-

lope, while the other profile 3 is free and fixed to profile 2 by means of male and female members 4 and 5. Said profile 3 has the ends 3' fixed at the ends of profile 2 at the intersection points of sides 6 and 7 of the envelope.

[0006] For filling the product into the envelope, according to arrow A, the envelope is easily open without any difficulty by means of suction cups and pliers 8, since side 7 is free and profiles 2 and 3 are fixed each other.

[0007] After filling, the envelopes are sealed by means of a sealing bar 9, so as to close the upper edges of internal sides 6 and 7 above profiles 2, 3, and by means of sealing bar 9' with striking member 10 the free profile is sealed to side 7. The envelopes of the present invention, with the above-described features, can be open for filling without any difficulty and therefore there is no risk to spoil the external surface of the envelopes, neither leakage of the product occurs.

[0008] Furthermore, once the sealing is broken, the envelope can be resealed by means of the pressure plastic profiles 4 and 5.

[0009] It is to be noticed that the male and female pressure engaging members 4 and 5 are represented in figure 5 in a certain embodiment as a mere example only. In fact such engaging members could have a different shape without having any effects on the main feature of the invention, which does not deal with the embodiment of such members, but with the fact that profile 3 is made integral with second inner side 7 only after filling of the envelope, with the above mentioned advantages.

[0010] It will be possible to make changes of practical-constructive type to the invention, without departing from the scope of the inventive idea as claimed below.

Claims

1. An envelope of plastic material (1) comprising two internal sides (6, 7) in the upper part of the envelope that are suited to be sealed by means of male and female pressure members (4, 5), **characterized in that** it comprises a profile (2) which is provided with said members and integral with a first inner side (6); and a free profile (3) which is provided with said members being engageable in the members of profile (2) and sealable to the second inner side (7) after filling of the envelope.
2. The envelope according to claim 1, **characterized in that** the free profile (3) has the ends (3') fixed at the ends of profile (2) at the intersection points of the sides (6, 7).
3. The envelope according to the previous claims, **characterized in that** the edges of the inner sides (6, 7) above the profiles (2, 3) are suited to be sealed each other by a sealing bar (9), and the side

(7) too is suited to be sealed to the free profile (3) by means of a sealing bar (9') with a striking member (10).

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Fig.1

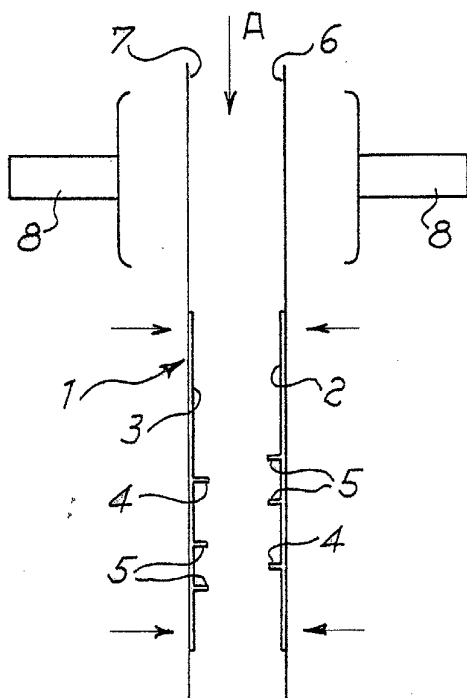


Fig.2

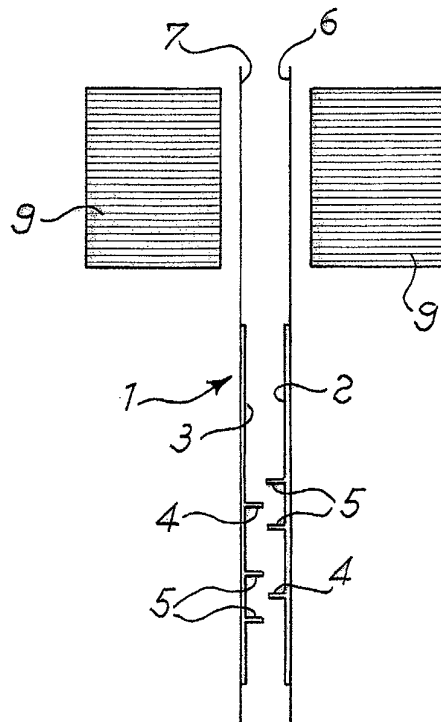


Fig.3

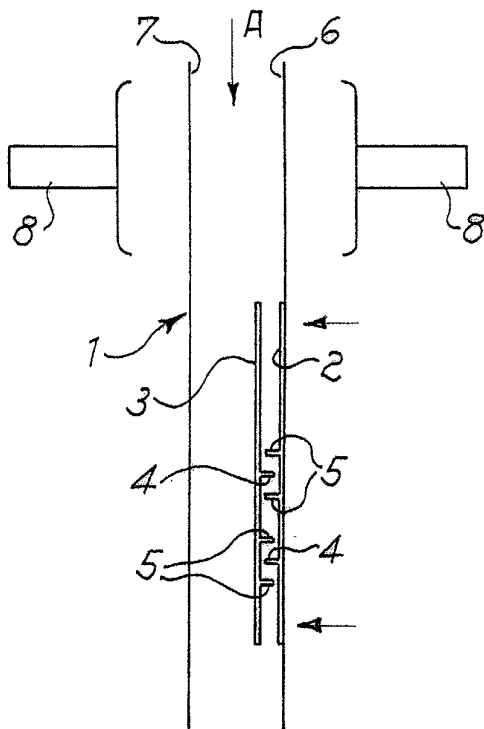


Fig.4

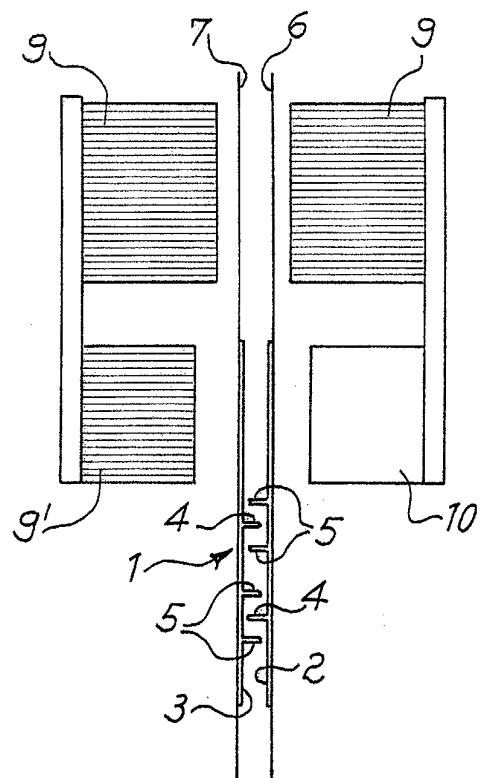


Fig. 5

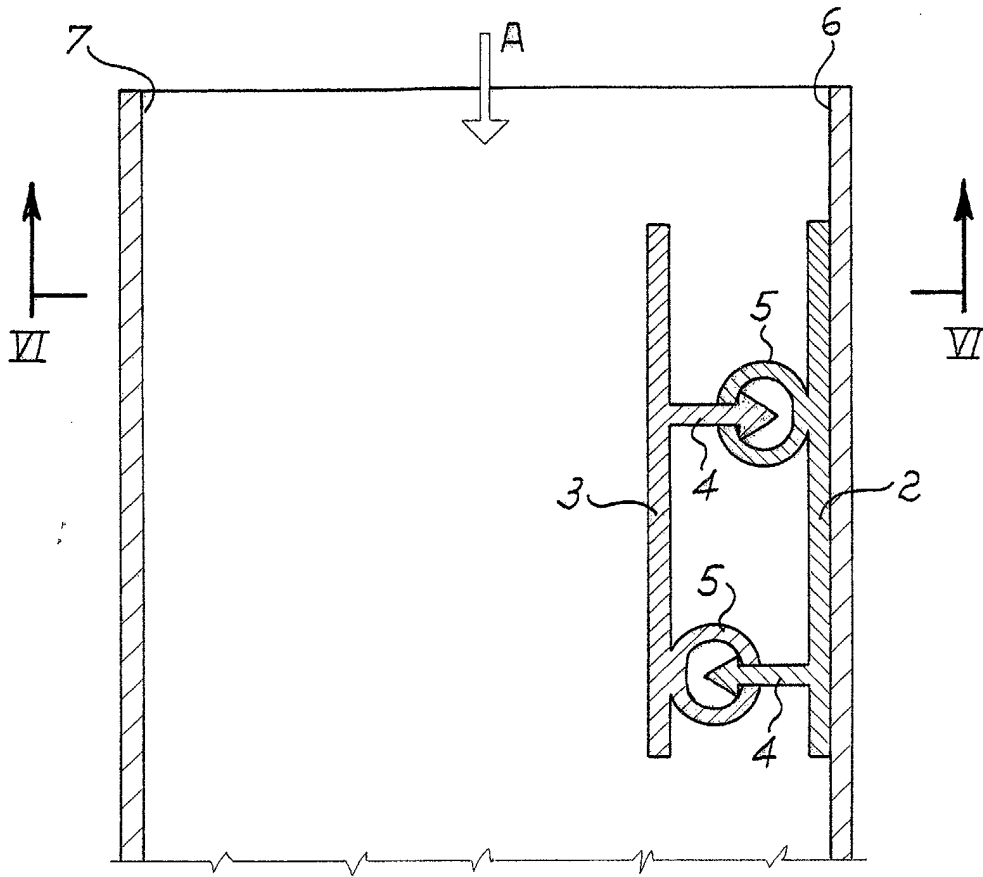
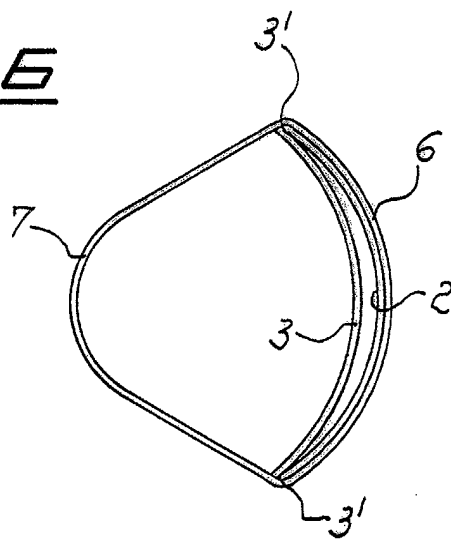


Fig. 6





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EUROPEAN SEARCH REPORT

Application Number
EP 03 42 5014

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 4 909 017 A (MCMAHON MICHAEL J ET AL) 20 March 1990 (1990-03-20) * column 3, line 55 - column 4, line 16; figures 1-8 *	1-3	B65B61/18 B65D33/25
X	US 6 292 986 B1 (THOMAS TOBY R ET AL) 25 September 2001 (2001-09-25) * column 3, line 47 - line 60; figure 2 *	1-3	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B65B B65D
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 24 April 2003	Examiner Bevilacqua, V
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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 03 42 5014

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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24-04-2003

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 4909017	A	20-03-1990	AU	621493 B2	12-03-1992
			AU	5684890 A	31-01-1991
			CA	2018436 A1	28-01-1991
			EP	0410126 A1	30-01-1991
			JP	3069410 A	25-03-1991
			NZ	233976 A	26-11-1991

US 6292986	B1	25-09-2001	AU	745314 B2	21-03-2002
			AU	4984900 A	21-11-2000
			CA	2333407 A1	16-11-2000
			EP	1162899 A2	19-12-2001
			JP	2002543999 T	24-12-2002
			WO	0067602 A2	16-11-2000
			US	6289561 B1	18-09-2001
