

⑫

EUROPEAN PATENT APPLICATION

⑳ Application number: 89200941.6

⑤① Int. Cl.4: **B65D 75/58** , **B65D 33/38**

㉑ Date of filing: 14.04.89

③① Priority: 22.04.88 DE 3813526

④③ Date of publication of application:
25.10.89 Bulletin 89/43

⑥④ Designated Contracting States:
AT BE CH DE ES FR GB GR IT LI LU NL SE

⑦① Applicant: **THE PROCTER & GAMBLE COMPANY**
One Procter & Gamble Plaza
Cincinnati Ohio 45202(US)

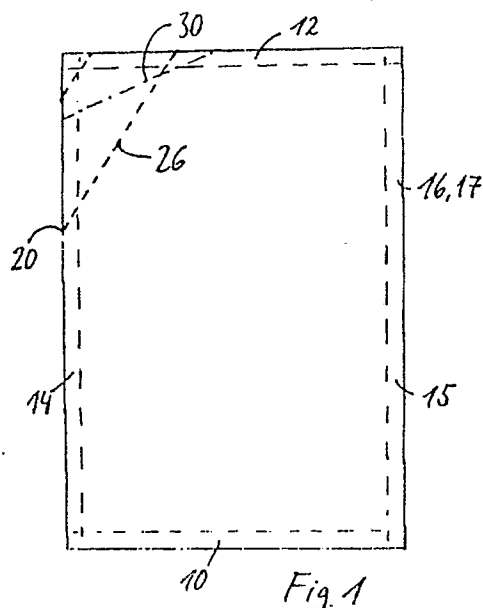
⑦② Inventor: **Stulens, Marielle Jeannine Coletta**
Eik 42
B-3740 Bilzen(BE)
Inventor: **De Clerck, Birgit Marthe Marie**
Gustave
Gagelstraat 5
B-8200 Brugge(BE)
Inventor: **Hensen, Henno**
Im Burgfeld 3
D-2810 Verden/Aller(DE)

⑦④ Representative: **Suslic, Lydia et al**
Procter & Gamble European Technical
Center N.V. Temselaan 100
B-1820 Strombeek-Bever(BE)

⑤④ **Pouch pourspout.**

⑤⑦ Side-sealed bag of a piece of sheet (16,17) sealed in the lower (10) and in the upper (12) and in at least one lateral (14,15) edge region, said piece of sheet being composed of a sheet material which can be sealed on one side, a pouring spout being provided which, prior to the cutting off of a top corner of the bag is tucked in along a marking, and, after the cutting off of the corner region of the bag, folds outwards and comprises a corner piece (26) which, when extended, is at least essentially triangular, is sealed, with the tip (20) pointing downwards, in the upper and the lateral edge region and is composed of sheet material which can be sealed on one side.

EP 0 338 622 A1



Side-sealed bag

The invention relates to a side-sealed bag of a piece of sheet sealed in the lower and in the upper and in at least one lateral edge region, said piece of sheet being composed of a sheet material which can be sealed on one side.

Side-sealed bags of a sheet material which can be sealed on one side have many applications, in particular for packaging flowable products. For the purpose of pouring out the contents, the upper edge region is completely or partially cut off by the user and the product is then poured out.

In the known side-sealed bags, it has proven disadvantageous that it is virtually impossible to pour the product out cleanly because of the lack of a pouring spout.

German Patent 3,244,762 has already disclosed a side-sealed bag for a flowable product, in which a discharge nozzle composed of a separately injection-moulded plastic is sealed into the sealed joint in the upper edge region. Although a discharge nozzle of this kind, sealed into the sealable sheet, is in principle suitable for producing clean pouring out, the introduction of a solid discharge nozzle of this kind into a side-sealed bag is nevertheless expensive.

Thus, the object on which the invention is based is to create a side-sealed bag of the type mentioned at the outset, from which the fluid product situated in the latter can be poured out cleanly after part of the upper edge region has been cut off, this bag being simple and economical to produce.

This object is achieved according to the invention by a pouring spout which, prior to the cutting off of a top corner of the bag is tucked in along a marking, and, after the cutting off of the corner region of the bag, folds outwards and comprises a corner piece which, when extended, is at least essentially triangular, is sealed, with the tip pointing downwards to the upper and the lateral edge region and is composed of the sheet material which can be sealed on one side.

It is furthermore proposed that the piece of sheet forming the pouring spout be provided centrally on its base side with a recess which permits the piece of sheet forming the bag or the pieces of sheet forming the bag to be sealed in the more limited corner region.

The side-sealed bag designed in accordance with the invention is preferably a flat-ended bag.

The invention is explained below with reference to a drawing, in which

Fig. 1 shows a representation of a side-sealed bag of this kind,

Fig. 2 shows a representation of the pouring spout in the extended condition, and

Fig. 3 shows a representation corresponding to Fig. 1, after a corner has been cut off and the pouring spout has folded outwards.

The side-sealed bag comprises a piece 16 of sheet (or two pieces 16, 17 of sheet) composed of a material which can be sealed on one side, which sheet (or sheets) is or are sealed in the lower edge region 10, in the upper edge region 12 and in the two lateral edge regions 14, 15.

In the corner region illustrated at the top left in Fig. 1, a corner piece 26 (illustrated in the extended state in Fig. 2) composed of a sheet material which can be sealed on one side is sealed, tucked in in the upper edge region 12 and the lateral edge region 14, with the tip pointing downwards, and, at that point where the corner piece 26 is inserted into the sealing groove of the corner regions 12, 14 of the piece 16 of sheet, the two faces of the pieces 16, 17 of sheet forming the side-sealed bag are not sealed to one another but are only sealed to the corner piece 26 forming the pouring spout 18.

On its base side, the corner piece 26, which is represented in the extended state in Fig. 2 and forms the pouring spout 18, is provided centrally with a recess 28 which makes it possible, in the more limited corner region of the pieces 16, 17 of sheet forming the side-sealed bag, for the two pieces forming the side-sealed bag to be welded, so that the bag is also closed in the region of the corner piece 26, and the two corners are thus not apart.

For the purpose of pouring out, the upper edge region of the pieces 16, 17 of sheet forming the flat-ended bag is cut off along the line 30 marked on the bag, with the result that the region in which the corner piece 26 is sealed to the upper edge region 12 of the pieces 16, 17 of sheet is severed completely, and the region in which the corner piece 26 is sealed to the edge region 14 is severed in the upper region. After the cut-open bag has been tilted to the side, the tucked-in central region of the corner piece 26, which is sealed to the pieces 16, 17 of sheet only in its edge region, folds outwards to form a pouring spout 18, the bag thus assuming the position illustrated in Fig. 3. It is now a simple matter to pour out the product accommodated by the bag, since said product is guided by the outwards-folded pouring spout 18.

The design proposed according to the invention of a pouring spout facilitating the pouring out of the contents is particularly suitable in the case of

a side-sealed bag which, having been designed as a flat-ended bag, has a base element in its lower edge region.

Claims

1. Side-sealed bag of a piece (16, 17) of sheet sealed in the lower (10) and in the upper (12) and in at least one lateral edge region (14), said piece of sheet being composed of a sheet material which can be sealed on one side, characterized by a pouring spout (18) which, prior to the cutting off of a top corner of the bag is tucked in along a marking (30), and, after the cutting off of the corner region of the bag, folds outwards and comprises a corner piece (26) which, when extended, is at least essentially triangular, is sealed, with the tip (20) pointing downwards, in the upper and the lateral edge region (22, 24) and is composed of sheet material which can be sealed on one side.

2. Side-sealed bag according to Claim 1, characterized in that the piece (26) of sheet forming the pouring spout (18) is provided centrally on its base side with a recess (28) which permits the piece(s) (16, 17) of sheet forming the bag to be sealed in the more limited corner region.

3. Side-sealed bag according to Claim 1 or Claim 2, characterized in that it is designed as flat-ended bag.

5

10

15

20

25

30

35

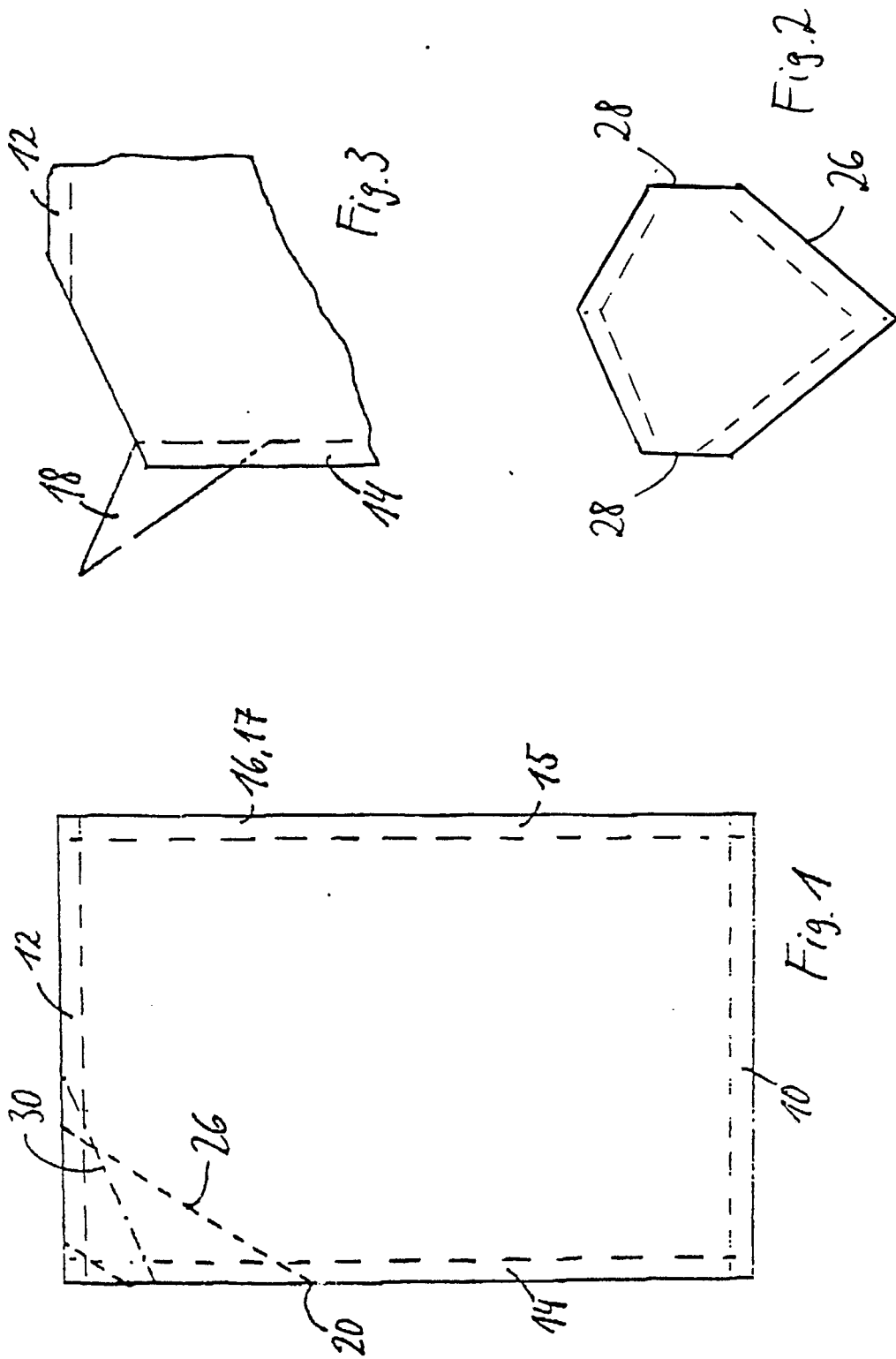
40

45

50

55

3





| 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.4) |
| Y | US-A-2 772 823 (R.H. PLAMANN) * Figures 1-4,7; column 2, lines 1-49 * ---- | 1,3 | B 65 D 75/58 B 65 D 33/38 |
| Y | US-E- 27 838 (W.C. LEASURE et al.) * Figures 3-6; column 2, line 70 - column 3, line 40 * ---- | 1,3 | |
| A | US-A-4 332 344 (G.G. STRODTHOFF) * Figures 1,2; column 1, lines 51-62 * ---- | 1-3 | |
| A | US-A-3 834 113 (J.H. HOWE et al.) * Figures 1,2,6,9,10; column 7, line 67 - column 8, line 8; column 9, lines 42-45 * ----- | 1-3 | |
| | | | TECHNICAL FIELDS SEARCHED (Int. Cl.4) |
| | | | B 65 D |
| The present search report has been drawn up for all claims | | | |
| Place of search THE HAGUE | | Date of completion of the search 20-07-1989 | Examiner PERNICE, C. |
| 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 | |