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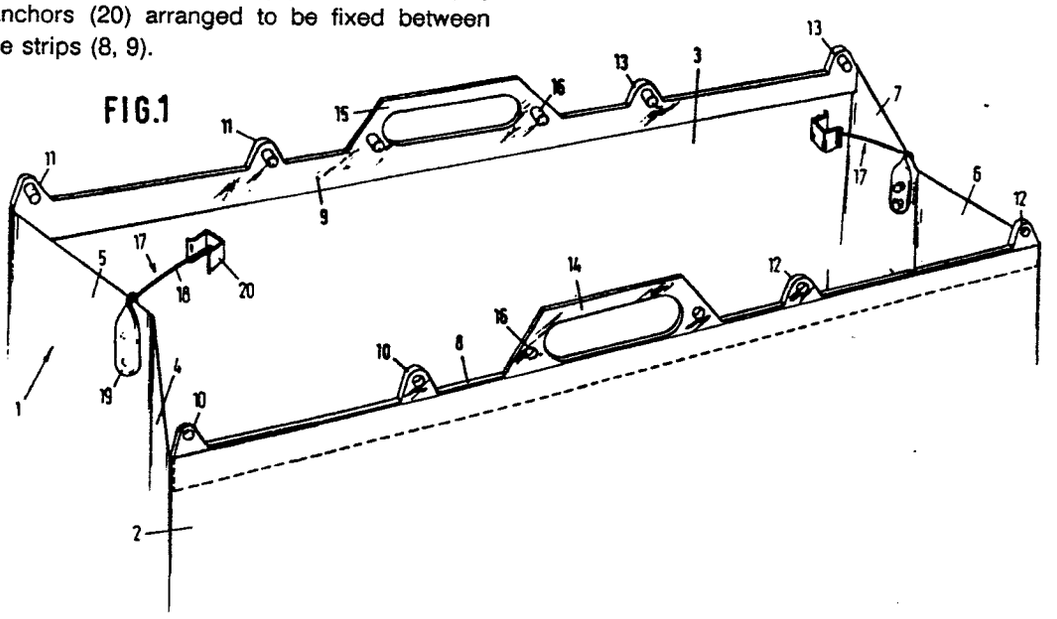
(54) Plastic bag.

(57) A plastic bag having a front wall (2), a rear wall - (3) and inwardly foldable sidewalls (4, 5; 6, 7), provided with a carrying closure comprising strips (8, 9) extending along the free upper edges of the front and rear walls (2, 3) with a handle (14, 15), which strips are lockable relatively to each other. In the closed condition of the bag, the inwardly folded sidewalls (4, 5; 6, 7) are fixed by pull elements (17) having anchors (20) arranged to be fixed between and to the strips (8, 9).

FIG.1



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Plastic bag.

This invention relates to a plastic bag having front and rear walls interconnected by sidewalls and provided with strips connected to the free upper edges of the front and rear walls defining the bag's mouth, which strips can be clamped together by locking means for closing the bag, at least the parts of the sidewalls bounding the bag's mouth being foldable inwardly to form sidetucks, there being provided retaining means for holding said sidetucks on the inside of the bag.

A similar bag of synthetic plastics film with a front wall, a rear wall and sidewalls is described in NL-A-7206665, and is destined for packaging a bulky product, such as a folded blanket. The closure strips are often connected to a handle and/or suspension hook in case the product packaged in the bag has to be displayed.

In order to prevent the sidetucks from falling open when the bag is closed, as a consequence of which the product within the bag is no longer enclosed in a dust-proof manner, the upper edges of the sidewalls are, in the prior bag, also provided with strips, which are so designed and connected to the strips of the front and rear walls that as the bag is closed, the sidewall strips are folded upon themselves about their centre, and clamped between the strips of the front and rear walls. In this way the upper edges of the sidewalls and the sidetucks formed from them during the closing of the bag are positively guided and retained in the inwardly folded position.

One disadvantage of the prior plastic bag is that the closure strip construction is complicated and hence expensive while, if made by injection moulding, it presents technical problems with regard to the dies.

It is an object of the present invention to avoid these disadvantages.

For this purpose, in the plastic bag according to the present invention, the retaining means for each of the sidetucks is a pull element on the one hand connectable to the middle portion of the tuck and on the other hand anchorable at a location on the inside of the bag.

In the plastic bag according to the present invention, the closure strip, which is also a carrying and/or suspension construction, can be kept simple and inexpensive, i.e., it can be limited to strips provided with a handle or a suspension hook and with mutual locking means, such as snap-fastener constructions, at the upper edges of the front and rear walls of the bag only.

According to the invention, the pull element may be connectable or connected to at least one of the closure strips.

For this purpose the pull element may be composed of a central shank portion, an end portion that can be connected to the bag material by clamping, glueing and the like, and an end portion in the form of a hook adapted to engage about at least one of the closure strips.

In such a construction, in the open position of the bag, either before or after an article has been placed therein, a pull element is clamped or secured otherwise to the central portion of the upper edge of each of the sidewalls. Subsequently, while the hook end is kept slightly above the level of the closure strips, the bag is closed by pinching the strips together in conventional manner, whereafter the hook engages over the upper edge of one of the strips, preferably behind one of the locking elements, and the adjacent shank portion of the pull element is clamped between the strips. In this way, each sidetuck is locked and cannot fall open beyond the ends of the closure strips in an undesirable manner.

Preferably, however, the hook is formed as a substantially U-shaped clip adapted to engage over the opposed contacting strips, with the shank portion being connected to the bottom of the clip. In this embodiment, each of the hooks engages over both contacting closure strips, and contributes to maintaining the closure strips in contact with each other. An additional advantage is that opening the bag is a more complicated procedure, and that, accordingly, unauthorized manipulations with packaged articles in a shop and the like are discouraged.

In illustration of the invention, one embodiment of the plastic bag will now be described, by way of example, with reference to the accompanying drawings. In said drawings,

Fig. 1 shows, in perspective view, a partially opened bag provided with pull elements according to the present invention; and

Fig. 2 shows the upper end of the bag in side-view in the closed condition.

As shown, the plastic bag 1 has a front wall 2, a rear wall 3 and sidewalls foldable inwardly upon themselves, so that halves 4, 5 and 6, 7 come to lie one on top of the other.

Secured to the upper edges of walls 2 and 3 are closure strips 8 and 9, respectively, each equipped with snap fastener type locking means 10, 11 and 12, 13. Furthermore, in the embodiment shown, each of strips 8, 9 is equipped with a handle portion 14, 15, also presenting locking means 16.

In the open condition of bag 1 shown in Fig. 1, pull elements 17 are secured to the upper edge of sidewalls (4-7). In the embodiment shown, pull elements 7 comprise a central shank portion 18 with a clamp 19 of the snap fastener type on one end, and an anchoring hook 20 at the other.

When the bag is in the closed condition the shank portion 18 is clamped between strips 8 and 9 and hook 20 clips over the contacting strips 8 and 9. As shown in Fig. 2, however, hook 20 is preferably positioned behind a set of cooperating locking means 10, 11 and 12, 13, so that sidetuck 4, 5 or 6, 7 is effectively pulled inwardly and cannot fall open.

To open bag 1, first hooks 20 must be released from strips 8, 9. Only thereafter can these strips be moved apart.

It is clear that various variants of the sidetuck anchoring arrangement can may be made without departing from the scope of the present invention. The only essential condition is that an inwardly directed pulling force is exerted on the sidetucks when the bag is closed, which force prevents the tucks from falling open, and without the need of providing a folding strip construction, by expensive injection moulding procedures, to guide and retain the sidewall portions.

Claims

1. A plastic bag having front and rear walls interconnected by sidewalls and provided with strips connected to the free upper edges of the front and rear walls defining the bag's mouth, which strips can be clipped together by locking means for closing the bag, at least the parts of the sidewalls bounding the bag's mouth being foldable inwardly to form sidetucks, there being provided retaining means for holding said sidetucks on the inside of the bag, characterized in that the retaining means for each of these sidetucks is a pull element on the one hand connectable to the middle portion of the tuck and on the other hand anchorable at a location on the inside of the bag.

2. A bag as claimed in claim 1, characterized in that the pull element is connectable or connected to at least one of the strips.

3. A bag as claimed in claim 2, characterized in that the pull element comprises a central shank portion, an end portion that can be connected to the bag material by clamping, glueing and the like, and an end portion in the form of a hook adapted to engage about at least one of the closure strips.

4. A bag as claimed in claim 3, characterized in that the hook is formed as a substantially U-shaped clip adapted to engage over the opposed contacting strips, with the shank portion being connected to the bottom of the clip.

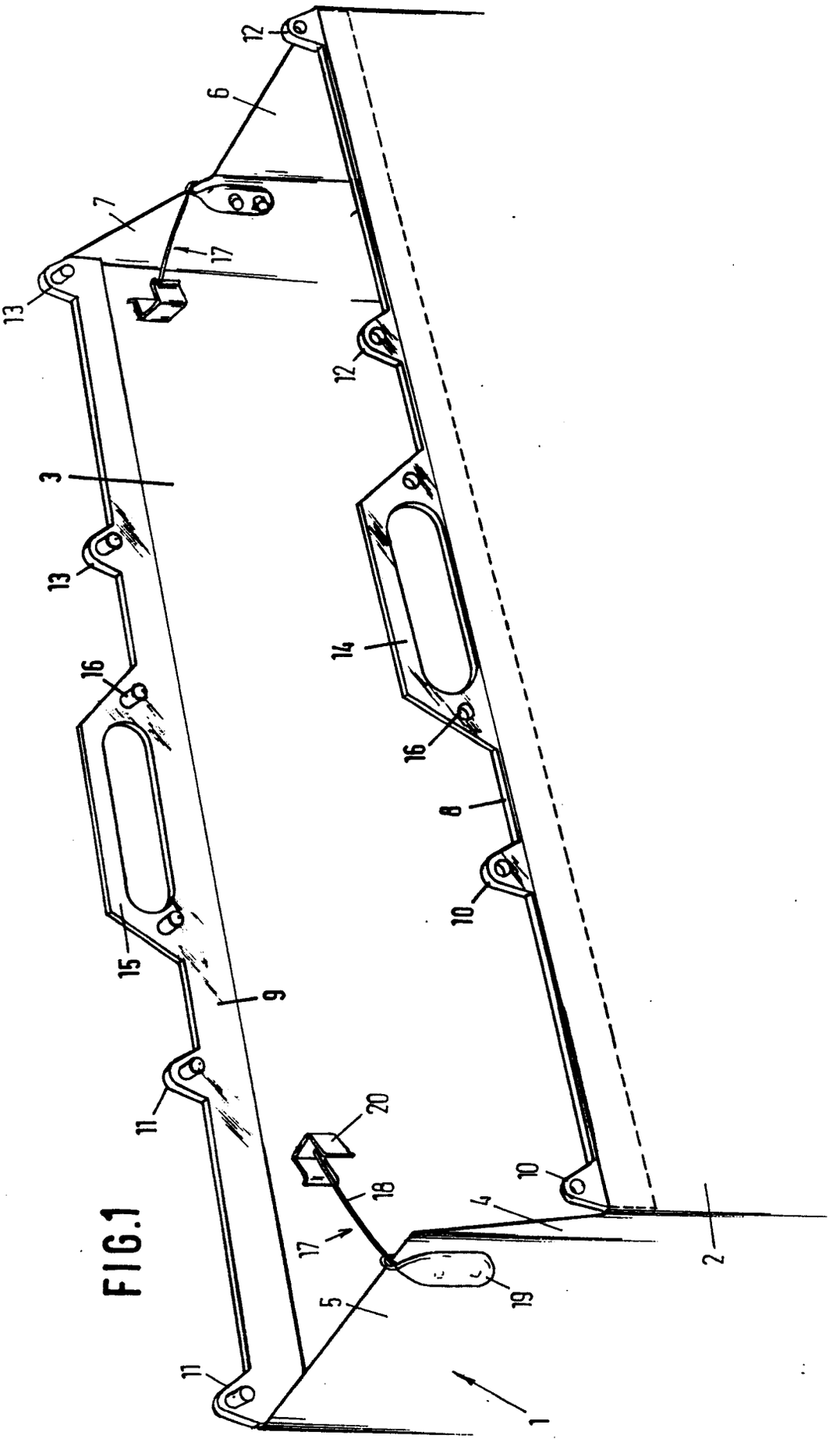
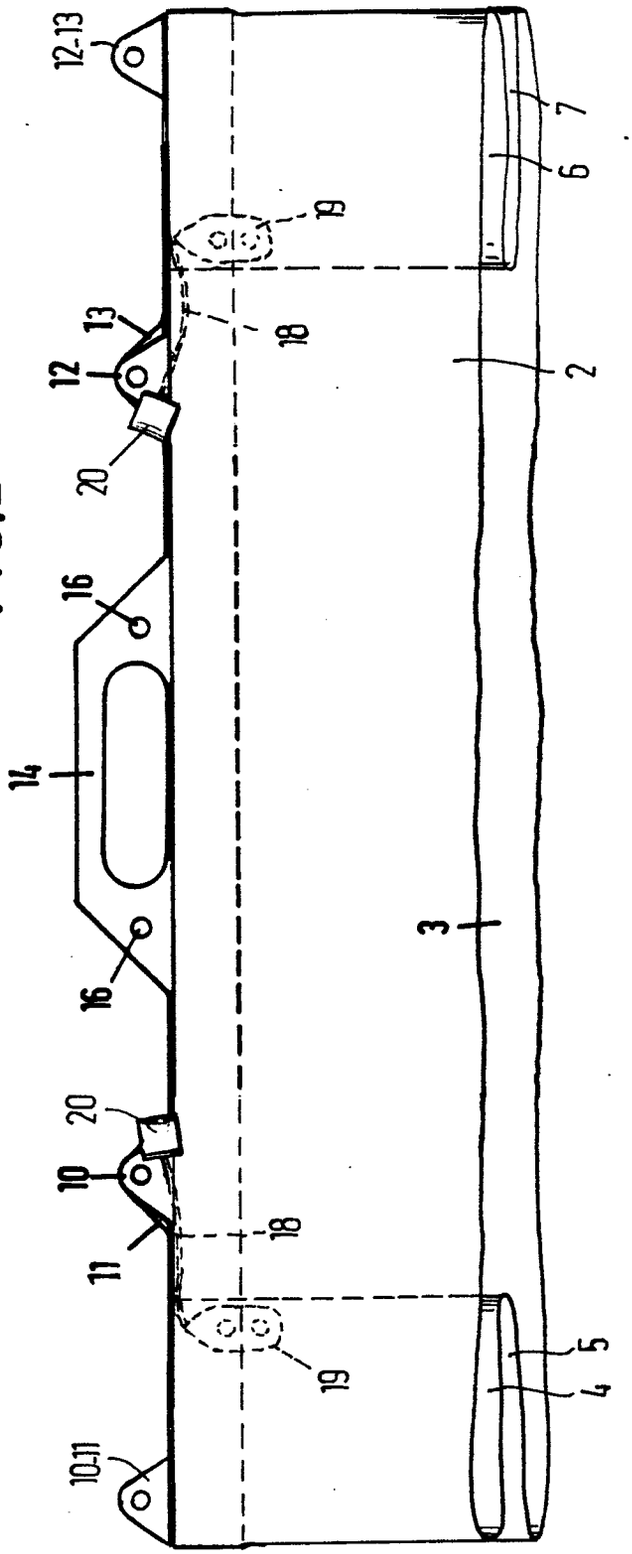


FIG.1

FIG.2



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EUROPEAN SEARCH REPORT

Application number

EP 86 20 2036

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)
D,A	NL-A-7 206 665 (SCHUILING) * Specification * -----	1	B 65 D 33/16

TECHNICAL FIELDS SEARCHED (Int. Cl.4)

B 65 D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	11-02-1987	VANTOMME M.A.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
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