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(54) **Shopping-bag utilizable for collecting garbage**

(57) The shopping-bag comprises a tubular bag (12) of a synthetic material, which is provided with handles (14, 16) at one of its ends and is closed at the opposite end by means of a first transversal weld (S1). The bag

also comprises a tubular lining (18) of a synthetic material, which extends adjacent to the tubular bag along its perimeter and is bonded to said tubular bag by a second transversal weld (S2) extending near the open end of the bag from which the handles (14, 16) project.

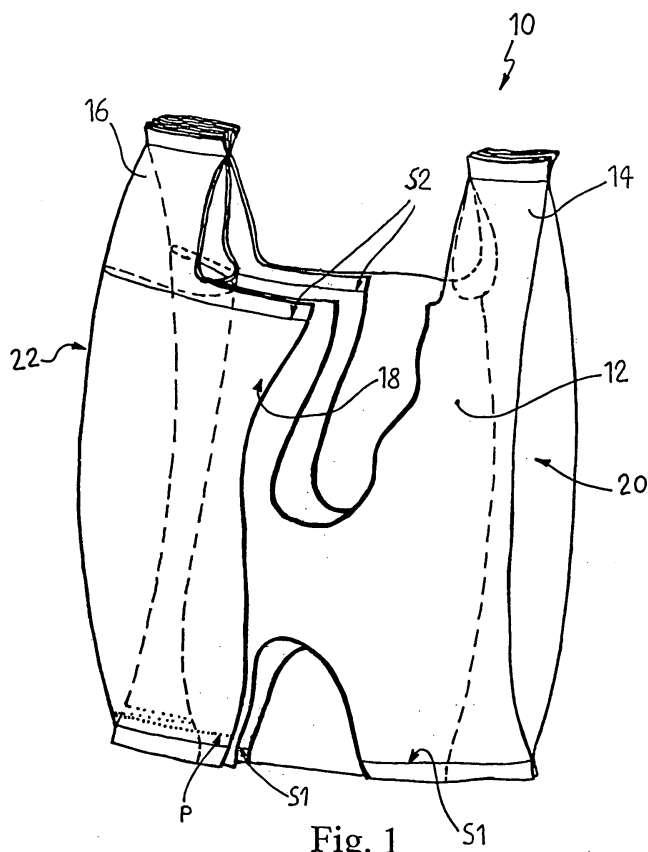


Fig. 1

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## Description

**[0001]** The present invention relates to a shopping-bag utilizable for collecting garbage.

**[0002]** In the course of the household duties, the practice is widely used of collecting garbage in the synthetic shopping-bags which are usually dispensed in markets or supermarkets for hand-conveyance of goods, rather than in garbage-bags.

**[0003]** Although such shopping-bags are suitable for hand-conveyance of goods, however they are undersized in relation to the needs of the garbage collection.

**[0004]** The main object of the present invention is therefore to provide a bag which is suitable both for hand-conveyance of goods and, in a subsequent use, for collection of sizable amounts of garbage.

**[0005]** The above-mentioned object and other aims and advantages, which will better appear below, are achieved by the shopping-bag utilizable for collecting garbage having the features recited in claim 1, while the dependent claims state other advantageous, non-essential features of the invention.

**[0006]** The invention will now be described in more detail with reference to a preferred, non exclusive embodiment shown by way of non limiting example in the attached drawings, wherein:

Fig. 1 is a perspective, broken away view of a bag according to the invention;

Fig. 2 shows the bag of Fig. 1 configured for a different use and to a reduced scale;

Fig. 3 is a diagrammatical, perspective view of a first step of a process for the mass-production of bags according to the invention;

Figs. 4-7 are four diagrammatical, plan views of respective, successive steps of the process of Fig. 3;

Fig. 8 is a perspective view of a second embodiment of the bag according to the invention;

Fig. 9 shows the bag of Fig. 8, in a configuration similar to Fig. 2 and to a reduced scale;

Fig. 10 is a perspective view of a third embodiment of the bag according to the invention.

**[0007]** With reference to Fig. 1, a bag 10 comprises a tubular shopping-bag 12 of a synthetic material, of the kind typically used for the hand-conveyance of goods, which is provided with handles 14, 16 at one of its ends, is closed at the opposite end by means of a first transversal weld S1, and has lateral gussets 20, 22.

**[0008]** According to the invention, shopping-bag 12 is wrapped in a tubular lining 18 made of a synthetic material and extending adjacent to the shopping-bag along

its entire perimeter, and is bonded to said shopping-bag by a second transversal weld S2 extending near the open end of the bag, at the base of handles 14. Lining 18 is also bonded to shopping-bag 12 along said first transversal weld S1 and has a perforation P extending parallel to, and in proximity of, the weld. Accordingly, lining 18 is substantially a second bag that houses the main shopping-bag 12.

**[0009]** When used for the hand-conveyance of goods, the bag is configured as shown in Fig. 1, i.e., is has the shape of a conventional shopping-bag such as those dispensed in markets or supermarkets. Nevertheless, handles 14, 16 are more rugged since they are formed of a double layer of material. When the bag is used for collecting garbage, lining 18 is torn along perforation P and is folded to assume the configuration shown in Fig. 2, which is almost double-sized with respect to the previous one. In such configuration, the bag can also be used in association with rigid bins, in a way similar to a conventional garbage-bag manufactured ad hoc.

**[0010]** Bag 10 can be mass produced in a processing line for conventional bags, by suitably modifying the line for the application of lining 18. For simplicity, and by way of example, a method will be now disclosed for the manufacture of gussetless bags, but it is understood that, if desired, gusseted bags can be manufactured by merely inserting an additional, longitudinal-folding step, as will be mentioned below. As shown in Fig. 3, a pair of elongated ribbons 28, 30, made of a synthetic material unwind from respective parallel cylinders 24, 26. One of the ribbons (ribbon 28 in the figure), which is to form lining 18, is slightly wider than the other ribbon, and the above-said transversal perforations P are cut in it at constant intervals. Ribbons 28, 30 are then conveyed to overlap onto each other and are welded to each other by means of transversal welds S2 (Fig. 4). Thereafter, the ribbons are longitudinally folded along a middle line L (Fig. 5), and their rims are mutually joined by longitudinal welds SI and SE, respectively made on the inner ribbon 28 and on the outer ribbon 30 (Fig. 6), thereby forming two flat tubes received one within the other and parted at intervals by the welds S2. Finally, as shown in Fig. 7, a transversal double-weld S1, S3 is made with an intermediate cut extending along a transversal line T in order to split the tube into bags, and then each bag is punched at F between the intermediate cut and the weld S2 to form handles 14, 16. If desired, gussets can be formed by merely introducing an additional step between the steps shown in Figs. 6 and 7, in which the lateral borders of the flat tube are longitudinally, inwardly folded, in a known way for the person skilled in the art.

**[0011]** A second embodiment of the bag, which is similar to the above-described first embodiment, is shown in Fig. 8, wherein a lining 118 with perforation P is welded inside the bag. Therefore, also in this case, in order to increase the size of bag 110, lining 118 is torn along perforation P and is then extended outwardly, thereby causing the bag to assume the configuration of Fig. 9,

with the handles outwardly hanging from it. The process for the manufacture of this second embodiment is similar to the above-described process, but perforation P will be made on the ribbon 30 that will constitute the inner wall of the bag.

**[0012]** A third embodiment of the bag is shown in Fig. 10, wherein the lower edge of lining 218 is not welded to shopping-bag 12 and is open. This third embodiment of the bag can be manufactured by means of a process which is similar to the above-described process, except for some variations that will be obvious for the person skilled in the art.

**[0013]** Three preferred embodiment of the invention have been disclosed, but of course many changes may be made by a person skilled in the art, depending on the circumstances, within the scope of the inventive concept. In particular, although it is particularly convenient to manufacture the bag in a single cycle, in order to bond the lining by means of the welds made on the main bag, the lining can be also glued to the bag in a subsequent step. Furthermore, lining 18 may also be bonded to shopping-bag 12, near its closed end, by means of a distinct, third transversal weld, rather than along said first transversal weld S1.

## Claims

1. A shopping-bag utilizable for collecting garbage, comprising a tubular bag (12) of a synthetic material, which is provided with handles (14, 16) at one of its ends and is closed at the opposite end by means of a first transversal weld (S1), **characterized in that** it also comprises a tubular lining (18) of a synthetic material, which extends adjacent to the tubular bag along its entire perimeter and is bonded to said tubular bag by a second transversal weld (S2) extending near the open end of the bag from which the handles (14, 16) project.
2. The shopping-bag according to claim 1, **characterized in that** said tubular lining (18) is bonded to said tubular bag (12) by a third weld extending along the closed end of the bag, and **in that** a perforation is cut in the lining (18) near said third weld.
3. The bag according to claim 2, **characterized in that** said third weld coincides with said first weld (S1).
4. The bag according to any of claims 1 to 3, **characterized in that** said lining (18) extends outside said tubular bag (12).
5. The bag according to any of claims 1 to 3, **characterized in that** said lining (18) extends inside said tubular bag (12).

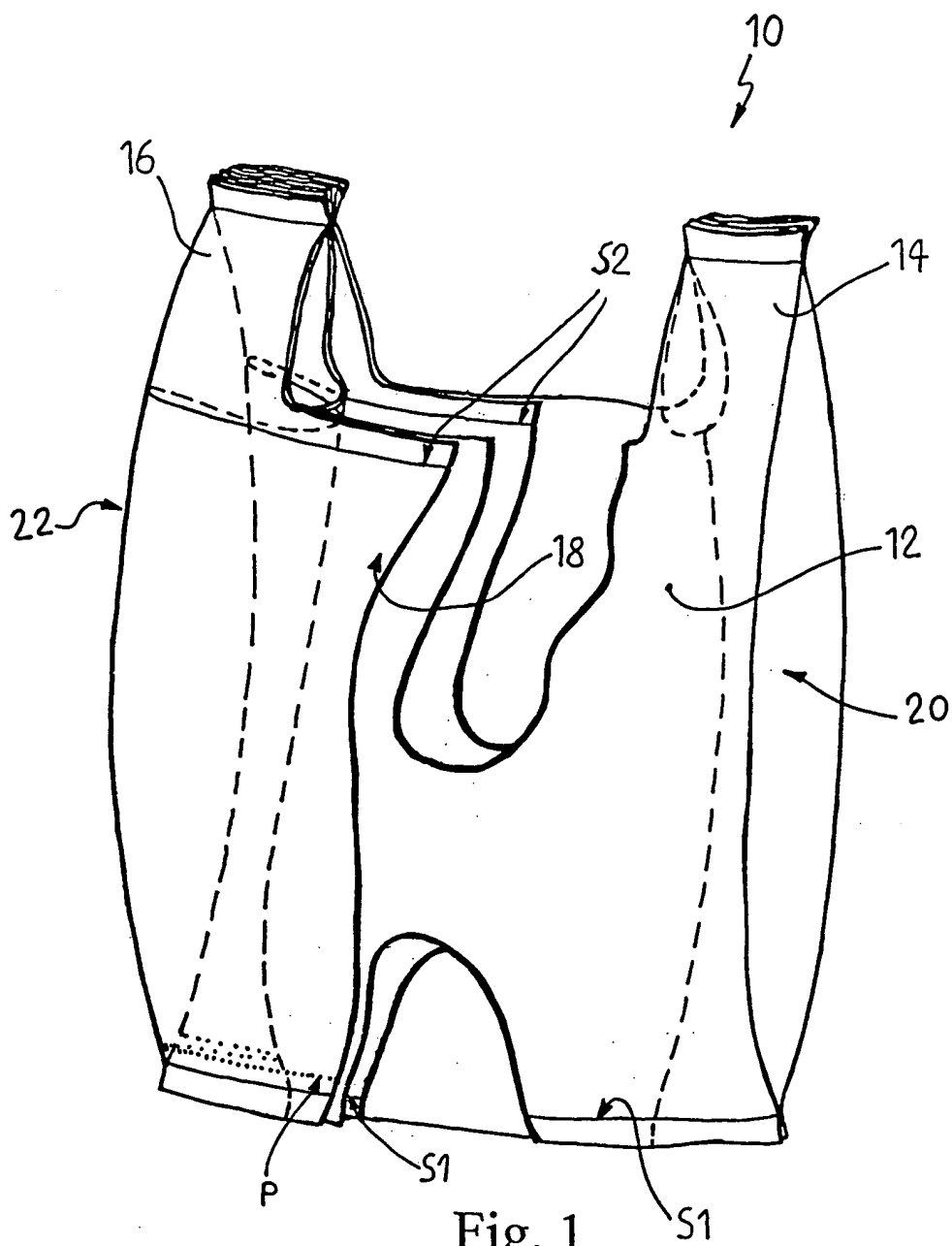


Fig. 1

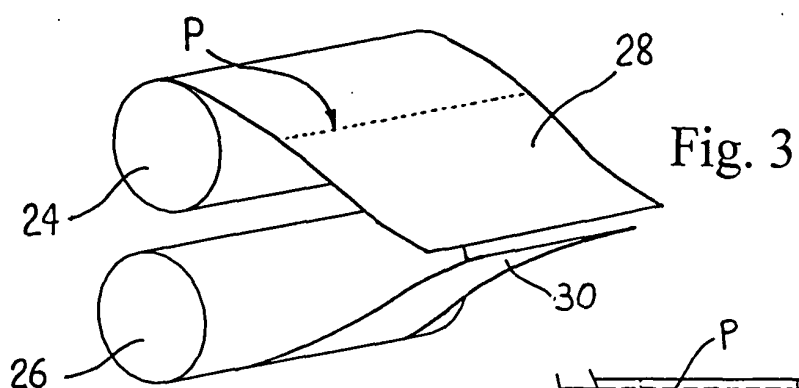
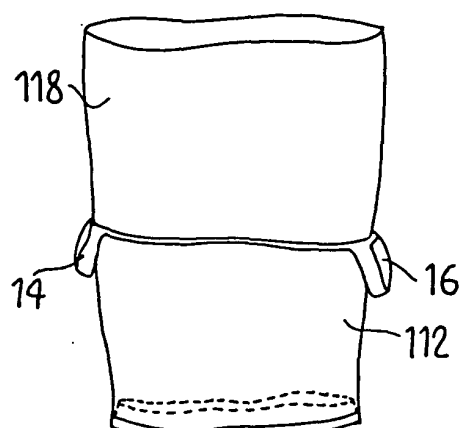
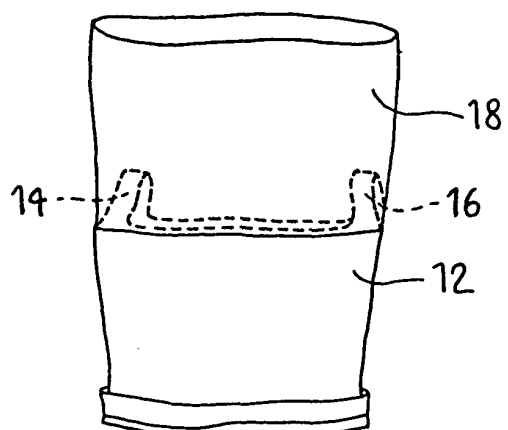
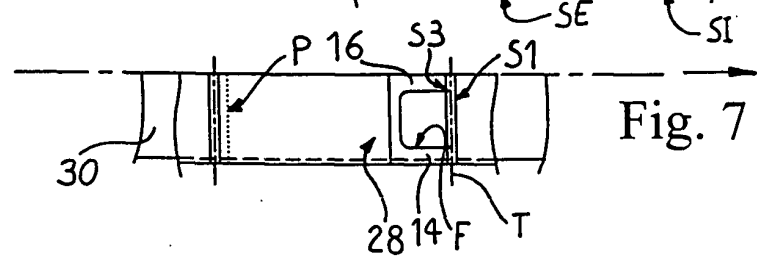
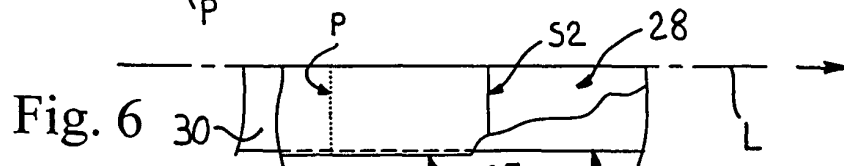
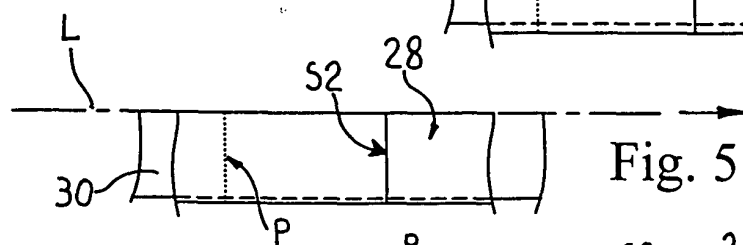
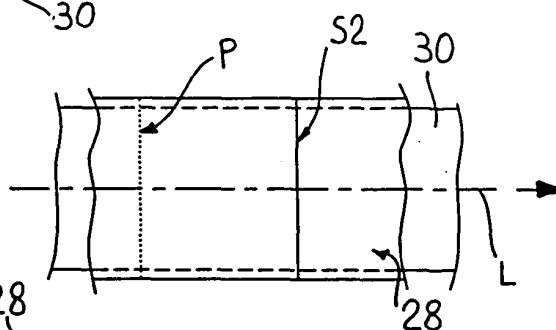


Fig. 4



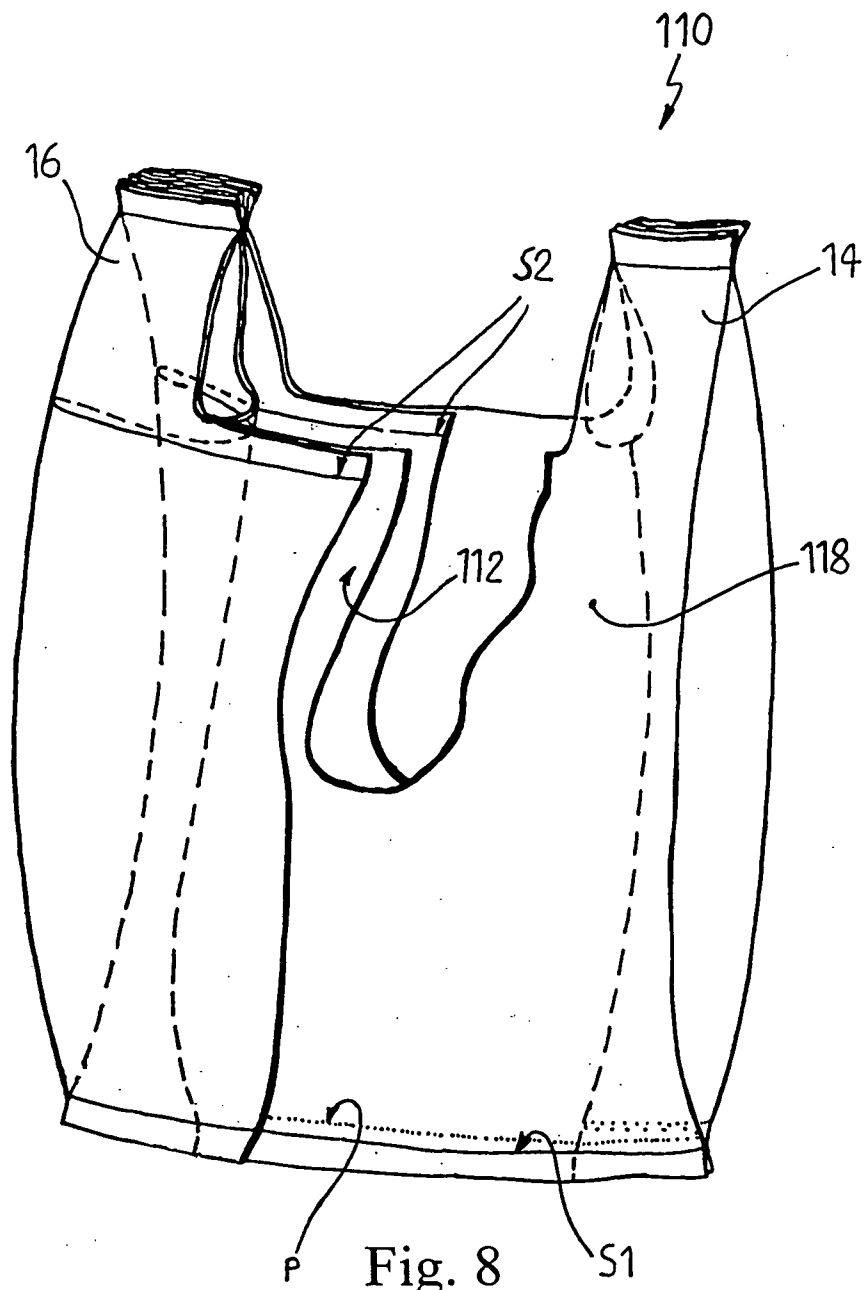


Fig. 8

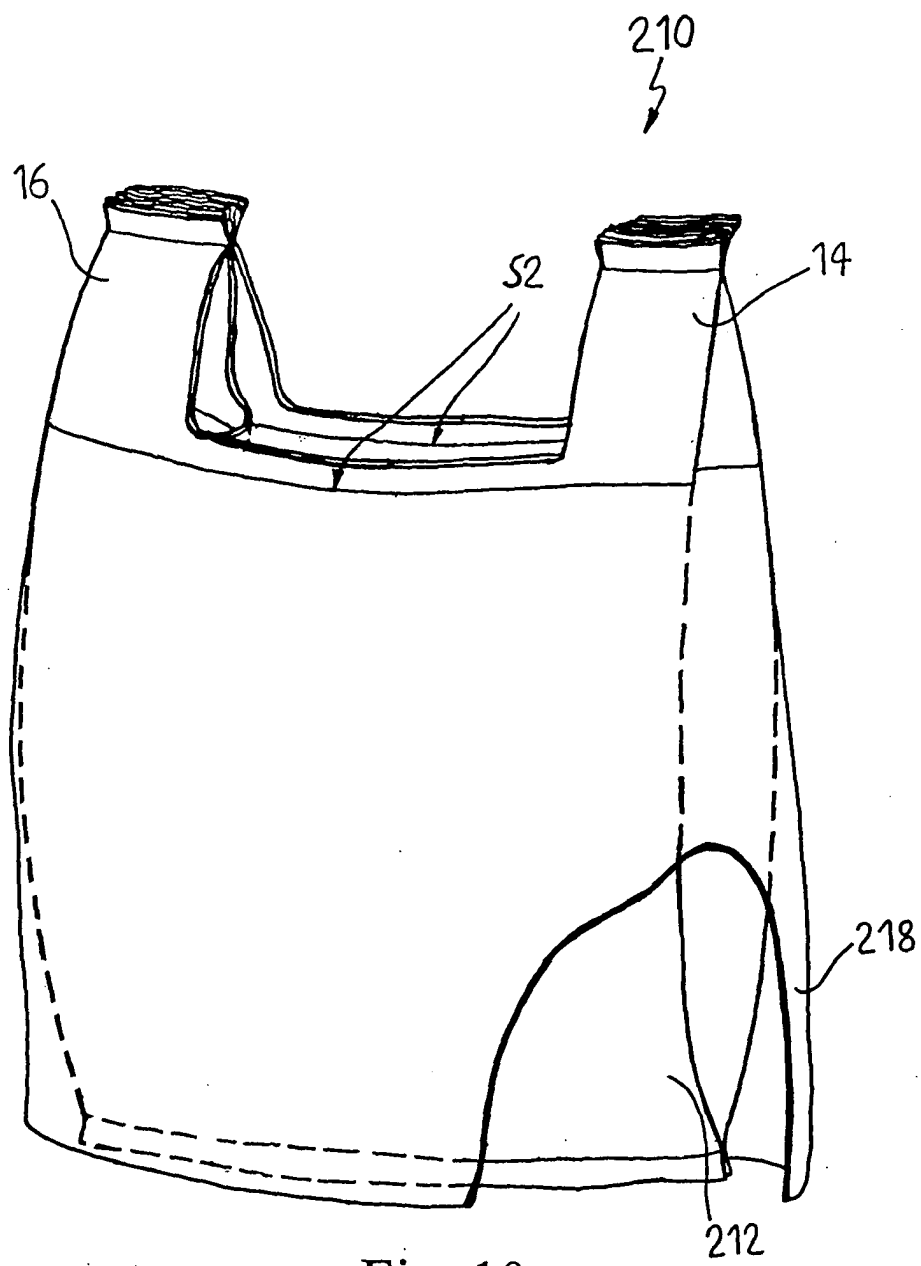


Fig. 10



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Application Number  
EP 04 00 2107

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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 28 May 2004	Examiner Bridault, A
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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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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