

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
12 June 2008 (12.06.2008)

PCT

(10) International Publication Number  
**WO 2008/067813 A1**

(51) International Patent Classification:  
*B65D 33/24* (2006.01) *B65D 5/46* (2006.01)  
*B65D 33/08* (2006.01)

(21) International Application Number:  
PCT/DK2007/000485

(22) International Filing Date:  
8 November 2007 (08.11.2007)

(25) Filing Language: Danish

(26) Publication Language: English

(30) Priority Data:  
PA 2006 01452 8 November 2006 (08.11.2006) DK

(71) Applicant (for all designated States except US): **OLE GRAM APS** [DK/DK]; Højsagervej 16, DK-5884 Gudme (DK).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **GRAM, Ole, Emil** [DK/DK]; Højsagervej 16, DK-5884 Gudme (DK).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

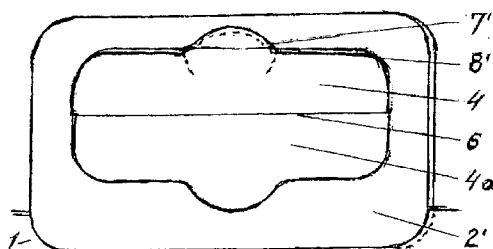
**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv))

**Published:**

— with international search report

(54) Title: HANDLE FOR CARRYING BAGS



(57) Abstract: A carrying handle of a plastic foil or cardboard for placing at packages, e.g. bags of plastic or paper, and especially for incorporating in the material of the package. The parts (2) and (2') of the handle have or will each get carvings (3) and (3') shaped as a part of a handle with the regions (4) and (4') attached at the top and with extensions (7) and (7'). When the regions (4) and (4') are bent around the folding lines (5) and (5') to a soft rounding (6), the extensions then can be fastened into the slits (8) and/or (8') for closing and locking. A special incorporated carrying handle, possibly with extra material (9) on one side of the bag, can have a set of carvings the other way around (3a) etc. The filled bag is folded and closed around a marked folding line (10) before locking. Handles for attaching can have the parts (2) and (2') connected, so they after the folding around the folding line (10) can be placed more precisely. Handles related to the invention can be expanded to independent carrying packages, that can be delivered plane and shut and locked around the content without any previous gluing.

WO 2008/067813 A1

## Handle for carrying bags

The invention relates to a carrying handle for packages, e.g. for bags of plastic and paper, to attach to these or integrated in the package itself, so that it becomes more comfortable to carry as well as obtains a lockable closing mechanism, and furthermore a new type of carrying package as nearer specified especially in the introduction to claim 1.

Various carrying handles for packages are known. For bags of plastic the handles e.g. can be integrated in the material of the bag as two prolonged, for four fingers adapted punched holes at the middle of the upper edge of the bag. As a reinforcement of the material of the bag this e.g. can be folded down to double thickness, or extra plastic foil can be added around the two holes before they are punched. There is also known loose carrying handles to be placed on the package, which usually consists of two strings of the same or a stronger material than that of the package, which are attached at the upper edge in approximately a mutual distance of the broadness of a hand.

A more advanced embodiment of a carrying handle for plastic bags, which at the same time serves as a closure for bags, is invented of Leon Kerr Laguerre and known e.g. from Danish Patent No. 101895. It consists of two plastic injection molded parts for placing facing each other at the upper edge of the bag. Each part has downwards in the most or in the total of the broadness of the bag a slim tape glued on the inside of the bag, while each part upwards forms half a handle. By means of holes in one part and corresponding taps in the other part the two parts after filling of the bag can be squeezed together to a carrying handle, which also serves as a stable closing mechanism of the bag.

From the Danish Patent Submitting No. 118272 there is also known a paper bag with a handle shaped so that the bag rests better in the hand, and which resists an uneven pull where the handle is attached. These so-called Loop Handles show, that an agreeable carrying handle is of importance for plastic bags as well as for paper bags.

The carrying handles mentioned each have their disadvantages and flaws. So the in the plastic bags punched holes often can be deformed or fall into pieces, if the content is too heavy, even if the bag material is doubled or an extra plastic foil is added to the bag where the holes are punched. The on the package placed carrying handles have disadvantages by the strings only being attached to the bag in a small region, so that the handle relatively easy can be torn from one end, as well as they are more costly than those integrated in the bags, which just needs a punching-out. None of these two types of carrying handles however are meant to serve as a closing mechanism as well.

The above-mentioned known injection molded carrying handle on the other hand is also meant to serve as a closing mechanism. Its drawbacks however are the trouble by placing the relatively clumsy handle on the bag, that the carrying handles in their wrappings with empty packages because of their great thickness require disproportionately much space, plus especially the high price of these plastic bags. But its existence also shows the need for a simpler handle, that can be closed as well as locked, and which also is designed so it will not cut into the fingers.

Yet others and cheaper solutions for carrying handles are known, which also are more comfortable to carry, to attach to as well as to integrate in the package itself. Windmüller & Hölscher thus in DE 1536366 shows a handle for attaching to a package, and Gatward shows in GB 797,755 an in a carrying bag integrated handle with a carving designed as a handle with regions preserved of the cut-out material. In both cases the cut out is attached to the top and will in a joined bending of the preserved regions form a carrying handle. As there by the bending is formed four layers of material, a stronger as well as a more comfortable rounded carrying handle is obtained, which will not cut too much into the fingers.

The purpose of the carrying handle according to the invention therefore is to correct the above-mentioned disadvantages by the hitherto known carrying handles, while at the same time the advantages not only are preserved but even increased, plus to create a better type of carrying package.

This purpose is especially obtained by the carrying handle according to the invention is formed as indicated in the characterizing part of claim 1.

By the carrying handle according to the invention being embodied as a relatively thin foil of plastic or cardboard, which is attached to the package, or of the material of the package alone, the carrying handle will be simple and cheap to produce and it will require a minimum of space as it in its simplest shape as carrying handles integrated in existing bags only have to be cut out of the material of the package itself, but in a slightly different design, even without the partly punched-out material needs to be removed. The handle can possibly even, as it already is common, be reinforced by an extra layer of down-bended or on-glued plastic foil just around the cut out region. This implies the great advantage that these integrated carrying handles can be produced on already existing machinery with few and small changes of the tool. This enables a quick, simple and cheap change to production of plastic bags according to the invention, which in connection with an only slightly higher price than the known plastic bags will be able to facilitate the introduction of the new carrying handles.

The carrying handle and the carrying package according to the invention will obtain this by just a small change of the punched out regions, so that an extension and a corresponding carving or slit arises. In this slit the extension from the bent region easily can be squeezed into and be locked tightly, which will increase the value of the carrying handle as a closing mechanism as well as improve its strength.

Another design of the carrying handle according to the invention specially concerns paper bags, which are closed by being folded as e.g. bakery bags. It only needs an extra bending of the bag plus an supplementary punching-out in the bag material itself, preferably on the top of and of the same design as the first, but the wrong way around in relation to this. The bag possibly can be reinforced by an extra piece of on-glued material on one of its sides. Thereby a handle is obtained with several times the original thickness of the bag material, which enables to use bags of lesser strong paper. This system also advantageously can be adjusted to and incorporated in plastic bags.

Carrying handles according to the invention can be formed to attachment to a prolonging of the package as well. The carrying handle then can be cut out in a special shape from a relatively thin and stiff foil of polyethylene or polypropylene, or from laminates of these materials, while there for bags of paper can be used carrying handles of paper or cardboard. Where the carrying handle is developed to be a real carrying package, its material e.g. can be a clear and stiff foil of polypropylene or a finer type of cardboard.

Examples of shapes and the connected advantages of carrying handles and carrying packages relating to the invention will appear from the drawing and the corresponding description. On the drawing shows

- fig. 1 a known carrying handle for attaching to the package seen from in front,
- fig. 2 the same seen in a cross section squeezed together and in a bent state,
- fig. 3 a cross section of a carrying handle with several folding lines,
- fig. 4 a carrying handle according to the invention seen from in front,
- fig. 5 the same seen from the back side in a closed and locked state,
- fig. 6 the same seen in a cross section,
- fig. 7 a shape of an in a carrying bag integrated handle according to the invention,
- fig. 8 another shape of an integrated carrying handle according to the invention,
- fig. 9 a connected set of carrying handles according to the invention, and
- fig. 10 a carrying package with a handle according to the invention seen from above and open.

Fig. 1 shows a known version of an attached carrying handle seen from in front, where a package 1, e.g. a bag of plastic or paper, at the top edge has two opposite each other placed and here identically shaped parts 2 and 2' of said handle, e.g. punched out from a foil of polyethylene, polypropylene or cardboard, which is welded or glued on the package 1, here on the outside. In the front part 2 there is a carving 3 shaped as a part of a handle, which limits a region 4, which at the top ends in a folding line 5. In the behind part 2 placed part 2' there possibly is an identically carving 3', which like the herein being region 4' and the likewise

corresponding folding line 5' can not be seen on fig. 1. The region 4 is meant for, in connection with the corresponding region 4' on part 2', to be folded around the folding lines 5 and 5' backwards and upwards with the fingers, when the carrying handle is taken into use.

On fig. 2 is seen a cross section of the same carrying handle, where the carved areas 4 and 4' together are bent backwards and tightly up against part 2' around the folding lines 5 and 5'. In the now empty region 4a approximately in the middle of the figure there is room for up till four fingers to catch and carry the bag in the handle. The region 4 in front will after the bending appear as a bit shorter than the region 4' backwards. It shall be noticed that the thickness of the handle in the shown cross sections is shown too big, as it normally just will be of the same or a bit bigger than the thickness of the material to the package 1.

Fig. 3 shows a corresponding cross section, but here with extra folding lines 5a and 5a'. By further folding lines, e.g. as double lines, or by changes of the shape of the regions 4 and 4', the handle can be supplied with an even softer bending 6, just as the bent regions 4 and 4' can be of different lengths. This contributes to achieve the in the next figure shown locking, so the carrying handle can serve as a stable closing mechanism as well.

On fig. 4 is seen a carrying handle according to the invention, which also forms a closing mechanism which can be locked firmly together. The carved region 4 in part 2 has here, as the corresponding not shown region 4' in part 2' an extension 7, which when the regions 4 and 4' is bent upwards, together with the corresponding not shown extension 7' in part 2', can be squeezed into and firmly locked into the slits 8 and/or 8', as it will appear from the two next figures. The handle thereby keeps the bag closed and locked, also after you have set the bag aside, so that the content will not fall out. The here shown special construction with the extensions 7 and 7' causes, that fewer finger-forces will be needed to place the bent regions 4 and 4' into the slits 8 and/or 8', than if you should squeeze the total broadness of the now together an upwards facing parts of the regions 4 and/or 4' into one in that case substantial broader pair of slits. By special stiff materials it even can be necessary furthermore to make

this easier, e.g. by incisions. As an extra advantage the carrying handle easily can be unlocked with the fingers alone to be reopened.

Fig. 5 shows the same shape as in fig. 4, but seen from the backside and in a bent and locked state, with the now empty region 4a wherein the fingers can be placed. The extension 7' in the region 4' is here preferably in connection with the here not shown extension 7 in part 2 squeezed into the slit 8' and/or into the here not shown slit 8, whereby the two parts of the carrying handle, and thereby the package as well, in a simple way is kept together and locked also after the bag is set free. This especially is an advantage for packages not having a stable shaped bottom. The tight locking also will make the handle even stronger besides the stabilizing effect of the bending itself. The two parts 2 and 2' possibly can be exactly identical, so they easily can be punched out together in the same working cycle.

On fig. 6 the same shape is shown in a cross section. It shall be noted, that the attaching of the bent regions, and thereby of the two parts of the carrying handle, also can be realized in other ways, e.g. by gluing, Velcro-fastenings, snap-fastenings, foils of a thickness so the bending is kept, or of other shapes of the regions 4 and 4'. A solution as the one shown yet seems to be the most simple and suitable.

Fig. 7 shows another type of a carrying handle according to the invention, as the carrying handle here forms a part of the package 1 itself. A plastic bag, and usually also a paper bag, is here seen equipped with an extra piece of material 9, attached to the inner side of the bag to add extra material thickness and thereby strength, as it already is known for both plastic- and paper bags. On the figure there is not shown the behind placed carving 3' in the opposite side of the package, or the region 4', the folding line 5', the slit 8' and the extra material 9', which correspond to the carving 3, the region 4, the folding line 5, the slit 8 and the extra material 9 on the shown front page of the in the package integrated carrying handle. These kind of carrying handle also is activated by you with the fingers bend the regions 4 and 4' in and upwards together and then squeeze the extensions 7 and/or 7' into the slits 8 and/or 8'. Depending among others of the material and the thickness the shape can be different.

On fig. 8 a special kind of incorporated carrying handle according to the invention can be seen, especially suited for long paper bags. The upper part of the bag here is intended for after the filling to be bent down and folded precisely over the clearly marked folding line 10. Hereby the above the folding line 10 placed carving 3a and the slit 8a together with the corresponding, not shown carvings on the back side, which all are the wrong way around in relation to the otherwise totally alike carving 3 and the slit 8, could be bent down to precise covering of these carvings around the folding line 10. The bag even can be shaped so, that such a folding can be repeated around new folding lines below. Optimal maybe two foldings at most, whereby the uppermost set of carvings yet now shall be placed rightly, the medium at the wrong way around and the lowest again rightly. Hereby you obtain a good carrying version of especially those paper bags, which as e.g. bakery bags often are closed by just being folded together at the top, even up till several times. The here shown version can possibly, alone on one side of the bag, be reinforced with an extra material, whereby it in the folded state will remind you of the in fig. 7 shown bag, yet now with a shut top edge after folding around the folding line 10. The same appearance a folded bag with e.g. two of such folding will have. This kind of an integrated carrying handle also advantageously can be adapted to plastic bags, if the usual thin material of the bag e.g. on one outer side alone gets one with a print equipped reinforcement before the carving.

Fig. 9 can serve as an illustration of two different things. Partly as the by fig. 8 mentioned reinforcement for an in the bag integrated carrying handle, which here is placed on only one of the sides of the bag, and which is meant to be folded to closing around the folding line 10. And partly a carrying handle for placing on the bag as shown in fig. 4, but where the parts 2 and 2' is created coherent, but easy to separate in the folding line 10. The folding line 10 in the latest case suitably can be perforated or carved, so the parts e.g. only are attached in the outer parts in the points 11 and 11'. Thereby it is secured that the two parts 2 and 2' after the folding around the folding line 10 is placed precisely opposite each other, whereon they after the attaching of the carrying handle either on the inside or on the outside on the two opposite sides of the bag, easily can be separated again at the top, possibly as a documentation of the

bag not previous being used. Also the two parts 2 and 2' thus can be made different, if this is wished. An extra advantage of such carrying handles for paper bags yet is, that they hereby can be added adhesive at the same side at the top and at the bottom, e.g. a layer of hot melt glue. The carrying handle afterwards can be folded along the folding line 10 to either one or the other side, depending of if it is to be placed on the inner or on the outer side of the bag, after which the attaching can take place e.g. by heat pressure at the same time on both parts 2 and 2' without they hereby are glued together. As for plastic bags the same can be achieved by the material for the carrying handle more easily is welded to the bag than to the other part of the handle, when the handle is placed on the inside of the bag, while the material of the bag has a higher mutual sticking point with a placing of the handle on the outer side of the bag. This e.g. can be realized by the bag on each of the inner sides is equipped with a piece of a laminate, which side with the highest sticking point, possibly a polyester foil, is facing each other.

Fig. 10 shows an example of a special shaped package with carrying handles according to the invention, that can be manufactured and delivered without any gluing, but totally flat with folding lines, incisions etc.. The package e.g. can be manufactured from a stiff and clear plastic foil and preferably be suited to contain light subjects as papers and flowers. On the figure there is not specifically indicated the shape of the incisions etc. in the top, bottom and sides of the package, as they can be adapted to the purpose and the content of the package. The idea here fundamentally is, that the totally flat package first needs to be folded in shape on the place of using, and thereafter can be closed and locked around its content solely by the means of its shape, but without any need for a previous gluing. Yet the package afterwards can be reinforced and marked by e.g. tape, as it is common with other kinds of packages. The hole produced by the bent region in the carrying handle thereby can, besides for transportation also be used for hanging-up the package. This kind of package according to the invention also may be produced of a stronger material and in sizes and shapes, so they can be made and delivered as a totally flat carrying package of e.g. corrugated cardboard both for transportation and for storage.

There could have been shown other shapes of the carrying handle according to the invention, e.g. where the attached carrying handle stretches into the total length of the broadness of the bag for better closing, possibly equipped with supplementary locking mechanisms or with other versions of the totally or partly punched out regions and slits. Hence the extensions 7 could be supplied with barbs. Specially however there could as a supplementary to fig. 8 have been shown a figure, where besides the folding line 10 underneath was an extra folding line for a supplementary folding and possibly locking, but where the order of the carvings from the top was right, opposite and right again. Yet the on the drawing shown figures should be sufficient for illustrating typical examples of the various products, which may be developed by using this new kind of a carrying handle.

What is claimed is:

1. A carrying handle preferably for placing at two opposite top edges on a bag or another package, where each of the parted or attached parts (2) and (2') of the handle either is of a thin or relatively stiff foil of plastic, cardboard etc. for attaching to the package (1) or consists of the material itself for the package (1), possibly reinforced with extra material (9), and which has or is equipped with carvings (3), (3') designed as a part of a handle with from the carved material preserved regions (4) and (4'), which are attached at the top and which preferably are alike in the two parts (2) and (2'), characterized by the fact, that the two parts (2) and (2') by bending of the regions (4) and (4'), usually around folding lines (5) and (5'), are locked to each other through the bent regions (4) and (4'), which possibly have incisions and are of different shapes and lengths, preferably by the use of extensions (7) and (7'), which possibly have barbs, and which are meant to be fastened into corresponding slits (8) and/or (8'), or to have other means for attaching, e.g. pressure locks, adhesives, Velcro fastenings, embossments or a thin and stiff aluminium foil.
2. A carrying handle according to claim 1 characterized by the fact, that the folding lines (5) and (5') on the two parts (2) and (2') are supplemented with extra, preferably parallel folding lines (5a) and (5a'), and/or have the folding lines (5) and (5') displaced for each other:
3. A carrying handle according to at least one of the other claims, characterized by the fact, that it besides the carvings (3) and (3') with the regions (4) and (4'), folding lines (5) and (5'), extensions (7) and (7') and the slits (8) and (8'), has an extra set of carvings (3a) and (3a'), regions (4a) and (4a') etc., which preferably are of the same shape as the carving (3), the region (4) etc., but placed the wrong way around in relation to those.
4. A carrying handle according to at least one of the other claims, characterized by the fact, that there possibly only at one of the parts (2) and (2') and preferably at the outer side is fastened a piece of extra material (9) for reinforcement of the package material, which has,

or in connection with the package material is equipped with carvings (3a) etc..

5. A carrying handle according to at least one of the other claims, characterized by the fact that it is equipped with printed, embossed or in other ways applied references, as e.g. "to be folded up here", "push down", with logos and/or with other information.

6. A carrying handle according to at least one of the other claims, characterized by the fact, that it is manufactured either separately by punching out from cardboard or plastic foil to be placed at the package (1), or is integrated in and solely consisting of material from the package (1), which yet possibly is equipped with extra material (9).

7. A carrying handle according to at least one of the other claims, characterized by the fact, that it is manufactured totally or partly by thermoforming of a plastic foil, by injection molding of a plastic material or by other methods of production.

8. A carrying handle according to at least one of the other claims, characterized by the fact, that the two parts (2) and (2'), the carrying handle comprises of, are manufactured connected in e.g. points near the edges (11) and (11').

9. A carrying handle according to at least one of the other claims, characterized by the fact, that it for the attachment to a package (1) of e.g. paper can be manufactured with the parts (2) and (2') connected and preferably each before the folding on the same side on the top and on the bottom applied an adhesive, e.g. a melting glue.

10. A carrying handle according to at least one of the other claims, characterized by the fact, that its two parts (2) and (2') are extended and shaped coherently with top, bottom and sides, and with incisions etc. to form a complete package.

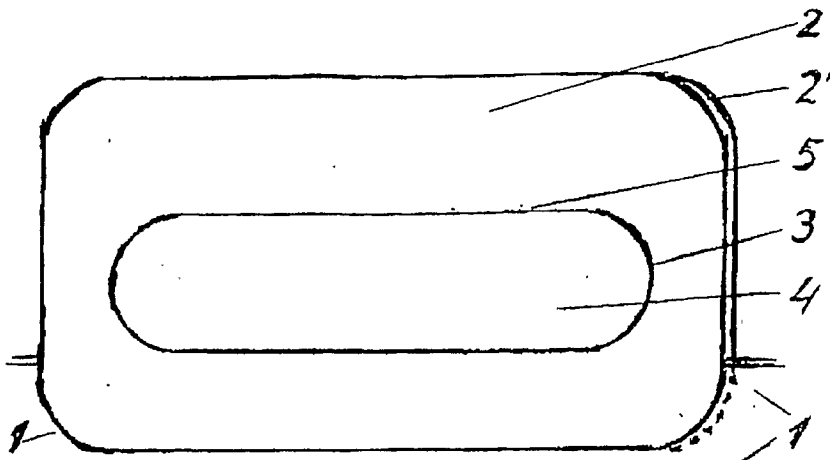


Fig. 1

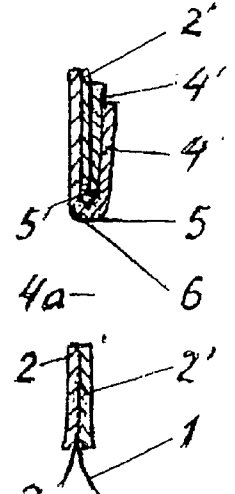


Fig. 2

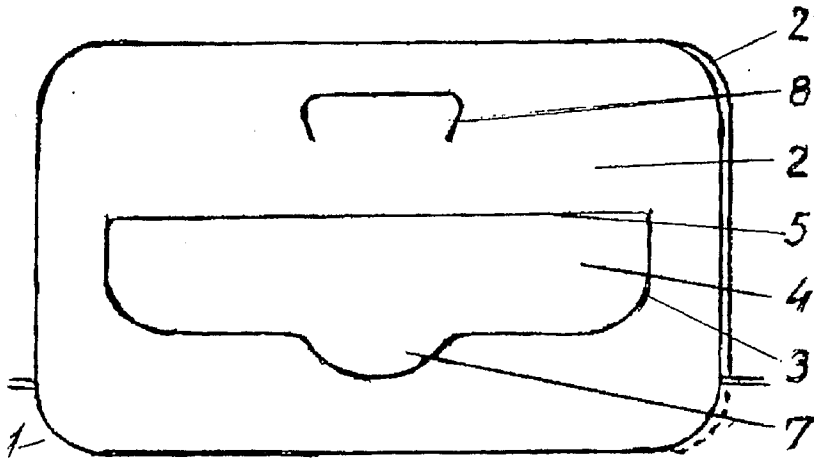


Fig. 4

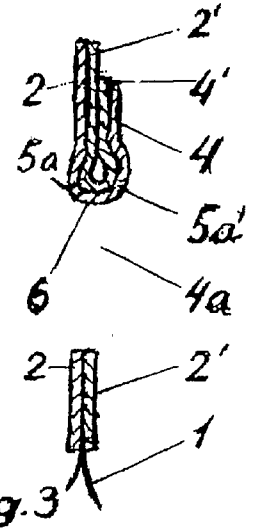


Fig. 3

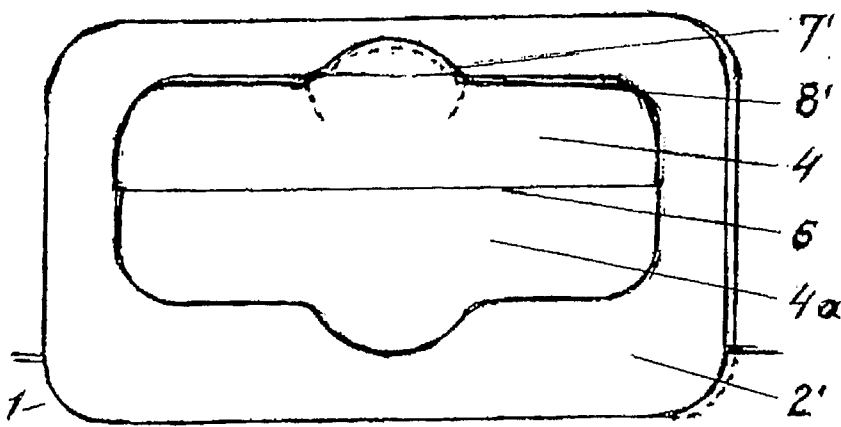


Fig. 5

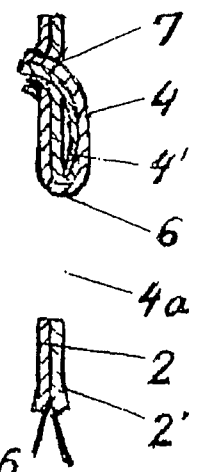


Fig. 6

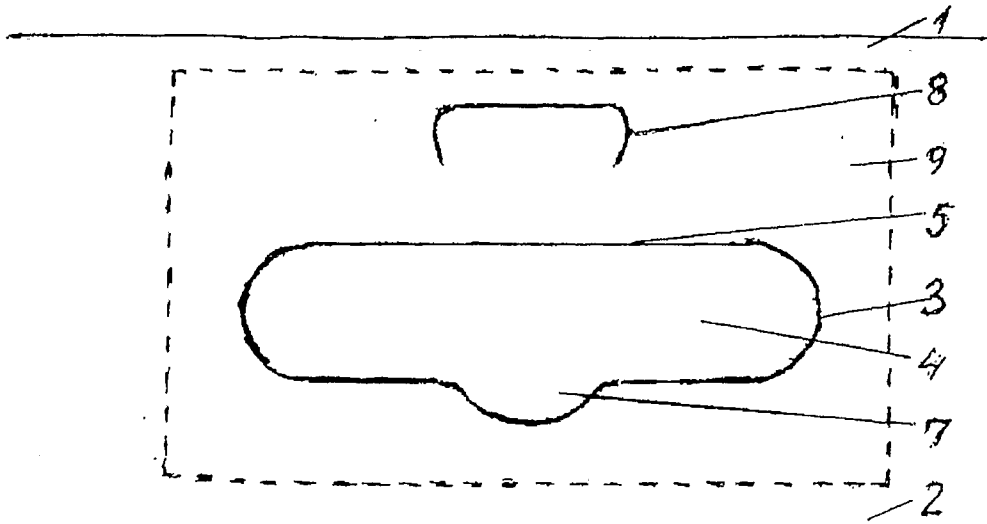


Fig. 7

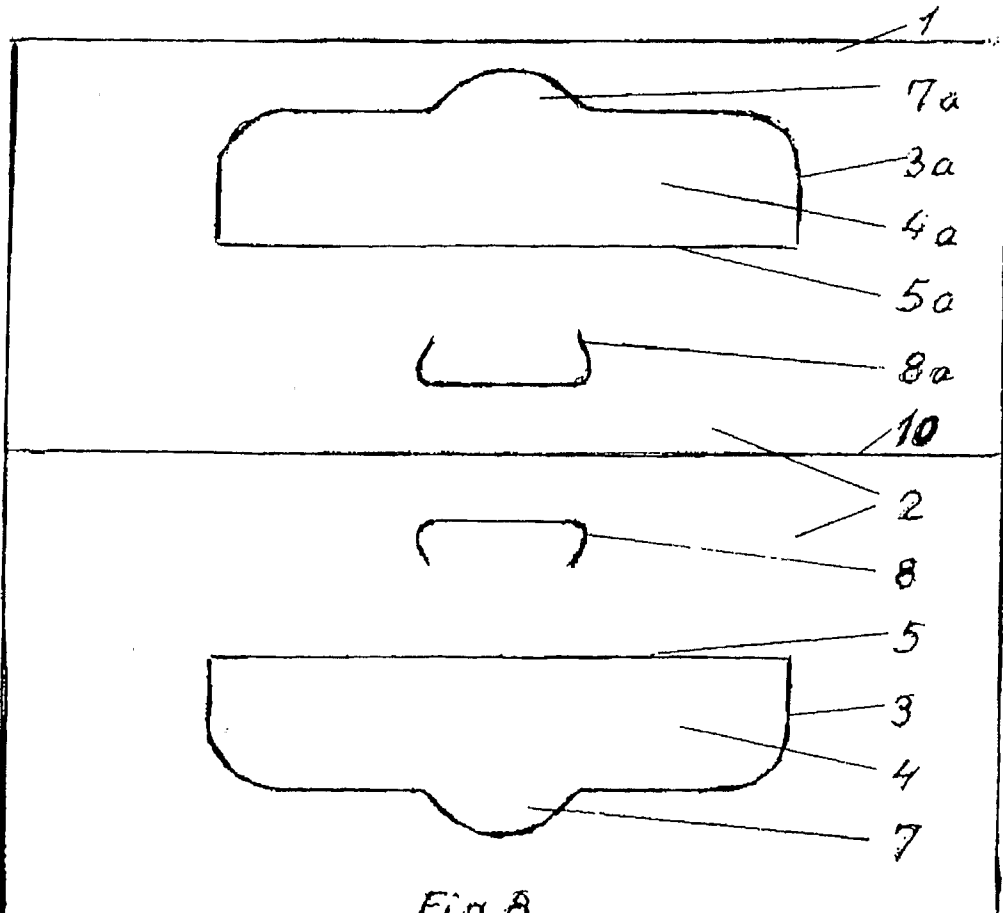


Fig. 8

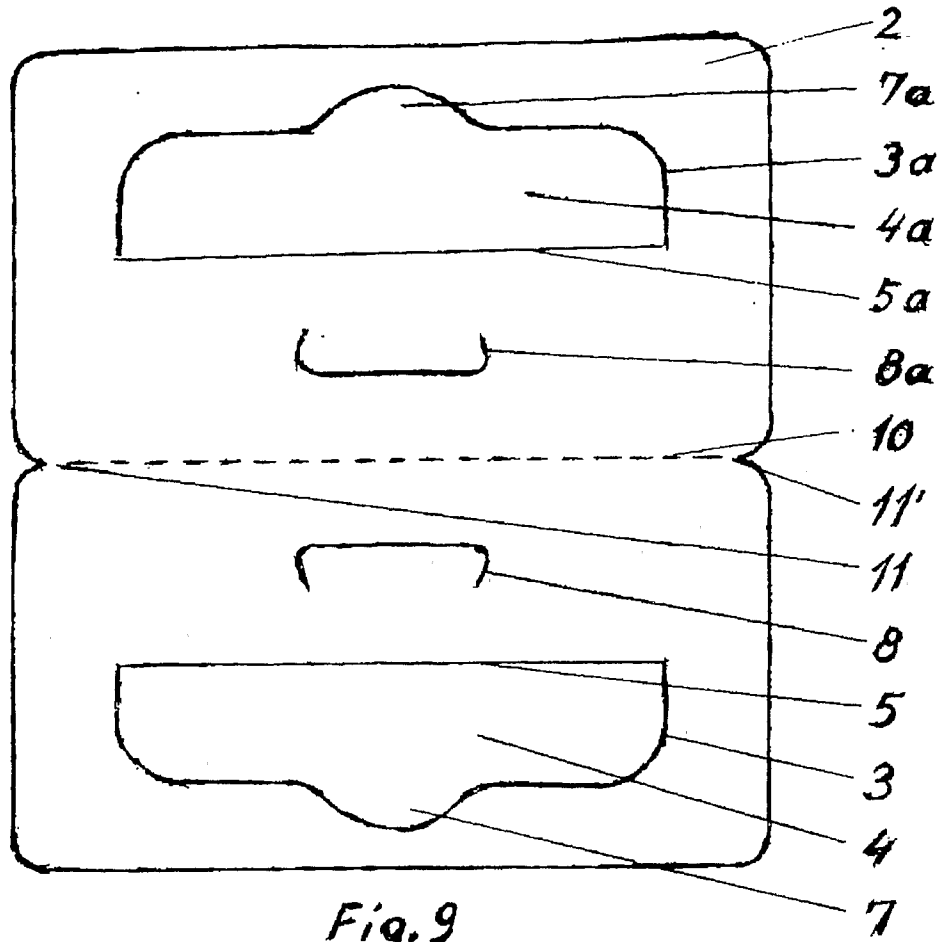


Fig. 9

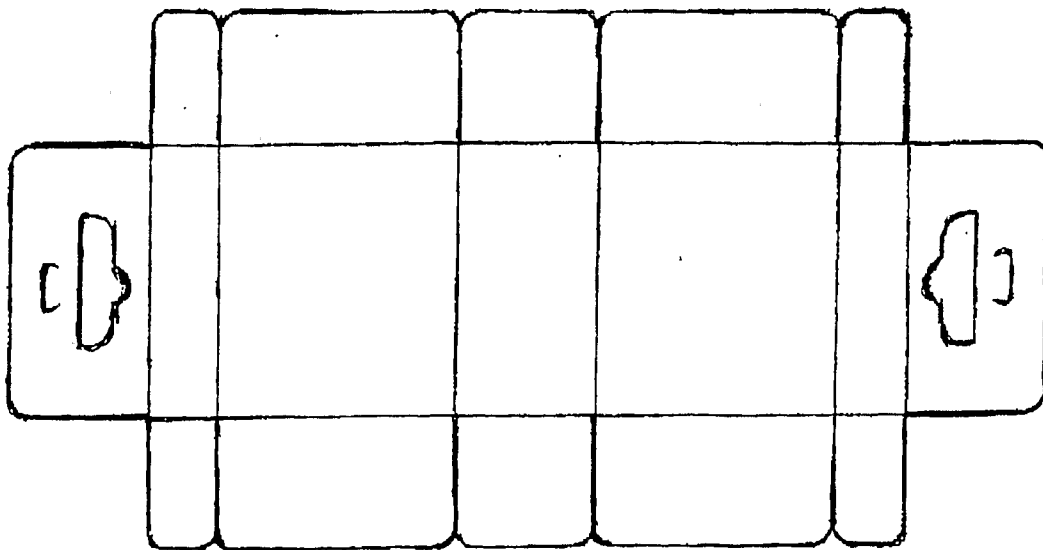


Fig. 10

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/DK2007/000485

**A. CLASSIFICATION OF SUBJECT MATTER**

**IPC: see extra sheet**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

**IPC: B65D**

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

**SE,DK,FI,NO classes as above**

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**EPO-INTERNAL, WPI DATA, PAJ**

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2336630 A (NICHOLS, H), 14 December 1943 (14.12.1943), page 1, column 2, line 15 - column 2, line 40; page 2, column 1, line 1 - column 1, line 48, figures 3-4, abstract	1-2,4-9
Y	--	3,10
Y	DE 1536365 A (WINDMÖLLER & HÖLSCHER), 22 January 1970 (22.01.1970), page 10, line 3 - line 12, figures 2,9, abstract	3
Y	GB 454113 A (LAMSON PARAGON SUPPLY COMPANY LIMITED), 24 Sept 1936 (24.09.1936), page 1, line 50 - line 54; page 3, line 36 - line 54, figures 9-10	10
	--	

Further documents are listed in the continuation of Box C.

See patent family annex.

\* 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 application or patent 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 such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

16 January 2008

Date of mailing of the international search report

18-01-2008

Name and mailing address of the ISA/

Swedish Patent Office  
Box 5055, S-102 42 STOCKHOLM  
Facsimile No. +46 8 666 02 86

Authorized officer

Kristina Berggren/CC  
Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.  
PCT/DK2007/000485

**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: 5  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
The characterizing part of said claim does not contain any technical features, it is mere a presentation of information.  
See rule 6.3
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/DK2007/000485

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 797755 A (GATWARD, H F), 9 July 1958 (09.07.1958), page 1, line 24 - line 45; page 1, line 74 - page 2, line 9; page 2, line 101 - page 3, line 10, page 3, line 37 - line 56, page 3, line 79 - line 84, figure 1-6, abstract  --	1
A	US 2400759 A (KATZ, M), 21 May 1946 (21.05.1946), figures 2-3, Detail 34  -- -----	2

**International patent classification (IPC)****B65D 33/24** (2006.01)**B65D 33/08** (2006.01)**B65D 5/46** (2006.01)**Download your patent documents at [www.prv.se](http://www.prv.se)**

The cited patent documents can be downloaded at [www.prv.se](http://www.prv.se) by following the links:

- In English/Searches and advisory services/Cited documents (service in English) or
- e-tjänster/anförda dokument (service in Swedish).

Use the application number as username.

The password is **IRUXCOPLHN**.

Paper copies can be ordered at a cost of 50 SEK per copy from PRV InterPat (telephone number 08-782 28 85).

Cited literature, if any, will be enclosed in paper form.

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

29/12/2007

International application No.

PCT/DK2007/000485

US	2336630	A	14/12/1943	NONE
DE	1536365	A	22/01/1970	NONE
GB	454113	A	24/09/1936	NONE
GB	797755	A	09/07/1958	NONE
US	2400759	A	21/05/1946	NONE