

SPECIFICATION

Title of the Invention:

Buffer packing bag

Field of the Invention:

The present invention relates to a buffer packing bag and, more specifically, to a buffer packing bag comprising of cushioning medium of plastic film as generally called wavelike buffering materials disposed of a number of individual air-inflatable parts in line.

Background of the Invention:

There have been various sorts of cushioning medium of plastic film such as a bag with air-inflatable parts which can be inflated by air supplied through an air inlet and avoid backward airflow under a control of check valves and limited leakage of air only at damaged air-inflatable parts.

The buffer packing bag made of said cushioning medium is known, for example, as disclosed by Japanese Utility Model Application published under No. H06-35973. It generally looks like an envelope in configuration, which has less space with sufficient depth (height) for containing an article to be protected. When the buffer packing bag is bulged with air, it is difficult to insert or remove the article. In particular, the bag is not adaptable as a buffer packing bag for an article like a portable DVD player which is hard and has sharp edges. After such an article is inserted into the bag, a problem could be occurred when the article is transported or when the article is inserted or removed, the former resulting in leaving the article damaged and the latter resulting in an air leaking hole in the air-inflatable parts with an edge of the article.

As for the conventional buffer packing bags, some have a flap with adhesive for closing an inserting slit, and some do not. A problem in the first case is that the packing bag is unable to be reused as a buffer bag because part of flap with adhesive has to be opened or cut off with a knife or the like when the article is removed. A problem in the latter case is that, in transportation, the article in the bag is likely to come out of the bag and other things can come in to the bag through the slit.

Brief Summary of the Invention:



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In order to solve said problems, a first aspect of the present invention provides a buffer packing bag, characterized in that

the bag comprising a base 1 made of two plastic films placed one on another and heat-bonded at predetermined areas and spots, the base having a flat air-supplying passage 2 with an air inlet 13 formed along one of sides of the base 1 and a flat air-inflatable section 3 formed beside said air-supplying passage 2;

said flat air-inflatable section 3 being divided into multiple individual air-inflatable parts 4 formed by heat-bonded lines running parallel to the length sides;

a flat check valve 5 of plastic film in each of the individual air-inflatable parts 4 functioning to allow and stop air flow between each of the individual air-inflatable parts 4 and the air-supplying passage 2;

an air-flowing space-making fold 6 formed in both sides of said air-inflatable section 3 formed as at least one line along the length sides of the base 1 by heat-bonding partially with a predetermined interval crossing each of individual air-inflatable parts 4 in order to make a containing space 29 for an article A to be protected;

a loading slit 28 for said article A formed on the base 1 of the bag by folding inward from both width sides along the length side of the base 1 and heat-bonding both of the overlapped length sides of the base 1 except for the air inlet 13 of the air-supplying passage 2, the loading slit for an article appearing between both width sides along the length side of the base,

wherein the air-inflatable section 3 of the bag is inflated by letting air in with pressure at said air inlet 13 through the air-supplying passage 2.

A second aspect of the present invention provides the buffer packing bag as defined in the first aspect, characterized in that an air-flowing space-making fold 6 in both sides of said air-inflatable section 3 is formed as at least one line along the length sides of the base 1 by heat-bonding partially with a predetermined interval crossing each of individual air-inflatable parts 4 in order to make a containing space 29 for an article A to be protected.

A third aspect of the present invention provides the buffer packing bag as defined in the first or second aspect, characterized in that a bending fold 7 is formed substantially parallel to and between the space-making folds 6 on the air-inflatable section 3 and formed by heat-bonding partially to allow air flow in each of the individual air-inflatable parts 4.

A fourth aspect of the present invention provides the buffer packing bag as defined in any of the first to third aspects, characterized in that a loading slit 28 for an article A to be protected is formed by folding inward from both width sides along the length side of the base 1 to overlap one another and heat-bonding both of the overlapped length sides of the base 1.

A fifth aspect of the present invention provides the buffer packing bag as defined in the fourth aspect, characterized in that a flat flap 30 is formed on an outer end edge of the base 1, wherein an adhesive layer 31 is provided inside on a side of said flat flap to cover said loading slit 28.

A sixth aspect of the present invention provides the buffer packing bag as defined in the fifth aspect, characterized in that said flat flap 30 is formed on the base 1, said flat flap 30 and the air-inflatable section 3 being separated from each other by heat bonding.

A seventh present invention provides the buffer packing bag as defined in the fifth aspect, characterized in that a transcription layer 33 which can be transcribed to said adhesive layer 31 is provided on the outer surface of the air-inflatable section 3 opposing to said flat flap 30.

An eighth aspect of the present invention provides the buffer packing bag as defined in the seventh aspect, characterized in that said transcription layer 33 is made of sheet or film material, or a printing layer printed directly on the outer surface of the air-inflatable section 3, whereby when said adhesive layer 31 on said flat flap which previously has been attached to said transcription layer 33 to cover the bag is opened, said transcription layer 33 is removed partially or wholly and remains attached to said adhesive layer.

A ninth aspect of the present invention provides the buffer packing bag as defined in the eighth aspect, characterized in that the transcription layer 33 made of said sheet or film material is formed of a multi-layer material the layers of which may be separated.

A tenth aspect of the present invention provides the buffer packing bag as defined in any of the first to third aspects, characterized in that an opening formed by folding the flat base 1 with both of said width sides along the length sides of the base 1 and to almost touch each other between both meeting sides and the end edges laid opposite to each other between both of said heat bonded sides, is said loading slit 28 for taking in or out of said article A contained.

A eleventh of the present invention provides the buffer packing bag as

defined in any of the first to third aspects, characterized in that said loading slit 28, formed by folding the flat base 1 and placing each of said width sides oppose to each other with a certain breadth of gap remaining, serves as an opening for inserting or removing said article A.

A twelfth aspect of the present invention provides the buffer packing bag as defined in the first invention, characterized in that said base 1 is constituted by a transparent or translucent plastic film.

A thirteenth aspect of the present invention provides a buffer packing bag, characterized in that the bag is comprised of:

a containing space 29 for an article A to be protected with a first and a second containing portion formed therein; and

a loading slit for inserting or removing said articles, the containing space, the first and the second containing portions comprising a base 1 made of plastic films placed one on another and heat bonded along length sides thereof, the base 1 including a plurality of individual air-inflatable parts 4, said individual air-inflatable parts 4 being formed parallel to each other by heat-bonding the base 1 at multiple spots and being inflated by air,

said containing portions being pocket-shaped with an opening and defined by said loading slit, said opening positioned between an edge of each of the pocket-shaped portions,

a part of the opening being the loading slit, the edges of the pocket-shaped portions being adjacent, making the first and the second containing portions face each other,

a bending fold 7 being provided in the base opposite to said opening, said bending fold formed by partially heat-bonding the base in a direction crossing the air-inflatable parts, the partial heat bonding allowing an air flow when the air-inflatable parts are inflated by air, thus inflating said buffer packing bag,

wherein the first containing portion contains a part of the article before the second containing portion is folded toward the first containing portion to contain a remaining part of the article.

A first and a second containing portions are defined by a loading slit 28 which appears between the pocket-shaped portions. A containing space 29 means each inner space of the first and the second containing portions. An opening of the first and the second containing portions is positioned at the edge of the pocket-shaped portions, actually defining a loading slit 28.

A fourteenth aspect of the present invention provides the buffer packing bag as defined in the thirteenth aspect, characterized in that each of air-inflatable parts 4 constituting the first and second containing portions is provided with a single air-supply passage 2, through which air is provided, a check valve 5 in each of the air-inflatable parts 4 allowing and stopping the air flow between the single air-supplying passage 2 and each of the individual air-inflatable parts 4.

Brief description of the drawings:

Fig.1 is a plan view of the base of the buffer packing bag, an embodiment of the present invention.

Fig.2 is a plan view of the bag the base of which is folded from both of width sides.

Fig.3 is a perspective view of the bag bulged with air.

Fig.4 is an enlarged view of fig.3.

Fig.5 is a longitudinal cross sectional view of the bag as folded outward at the bending fold outward.

Fig.6 is a perspective view of the bag as folded outward at the bending fold.

Fig.7 is a plan view of a check valve for use in the present invention.

Fig.8 is a partial cutaway perspective view showing a check valve attached to an individual air-inflatable part.

Fig.9 is a view showing an easy-releasable film as detached in part.

Fig. 10 is a longitudinal cross sectional view of the bag as folded outward at the bending fold in the embodiment 2.

Fig.11 is a longitudinal cross sectional view of the bag as folded outward at the bending fold in the embodiment 3.

Fig. 12 is a longitudinal cross sectional view of the bag as folded outward at the bending fold in the embodiment 4.

Fig. 13 is a plan view of the base of the bag in the embodiment 4.

Fig. 14 is a longitudinal cross sectional view of the bag as folded outward at the bending fold in the embodiment 5.

Fig. 15 is a plain view of the bag the base of which is folded from both of width sides in the embodiment 5.

Fig. 16 is a partial enlarged sectional view of the bag in the embodiment 5.

Detailed Description of the Preferred Embodiments:

(Embodiment 1)

In the description of the preferred embodiments of the present invention with reference to the accompanied drawings, the reference numeral 1 designates a base of the buffer packing bag. In this embodiment, the base 1, made of two rectangular hot-adherent plastic film sheets of the same size by heat-bonding together at the fixed area and spots, has a flat air-supplying passage 2 and an air-inflatable section 3, formed beside the air-supplying passage 2 along the air-supplying direction.

The air-inflatable section 3 is divided into multiple individual air-inflatable parts 4, and

a check valve 5, which is made of plastic film and attached inside to each of said individual air-inflatable parts 4, and

two space-making folds 6 functioning to automatically form a box-shaped space with desirable depth (height) for an article when the bag is bulged with air, and

a bending fold 7 functioning to fold the base outward and have a loading slit, as mentioned thereafter, open for an article.

In this connection, while the two rectangular plastic film sheets placed one on another are heat-bonded along the areas 8, 9, 10, 11, the air-supplying passage 2 is formed between a heat-bonded area 8 on one of the width sides of the base 1 and a narrow heat-bonded area 12, which is formed slightly away from the inner side of the heat-bonded area 8, and between the heat-bonded areas 8, 12, a narrow flat-tubular air inlet 13 is formed at one end.

With this embodiment, the heat-bonded area 9 on the same side of the air inlet 13 is made somewhat wider than the other heat-bonded areas 8, 10, 11 for the reason as described later.

The heat-bonded area 12 is arranged to allow air flow between each of the individual air-inflatable parts 4 - 4.

The individual air-inflatable parts 4 - 4 are the partitions of the air-inflatable section 3 and formed by heat-bonded lines 14 - 14 parallel to each other along the direction across the air-supplying passage 2. A check valve 5, as mentioned thereafter, is attached inside to each of the individual air-inflatable parts 4 - 4 in order to allow air flow between each of the air-inflatable parts 4 - 4 and the air-supplying passage 2 only via a check valve 5.

As shown in figs. 7 and 8, a check valve 5 is consisted of two plastic films like polyethylene films, which are thin, flexible, rectangular and hot-adherent, and placed one on another. Said check valve 5 is divided into two heat-bonded areas 15, 15 on both length sides and a check valve body 19 with an air-flowing passage 18 inside the body 19 between the openings 16, 17 at both ends of the body 19. In the half part of said air-flowing passage 18, an inverted V-shaped bonded area 21, bonded by heat, is formed with the top 20 of the area 21 directing to the opening 16 in the check valve body 19.

And in fig. 7, with said inverted V-shaped bonded area 21, air can flow through the first air-flowing channel 18a inside a flat check valve 5. A heat-bonded area 22 is a linear area from under the middle of said inverted V-shaped bonded area 21 to the end of the check valve body 19 while air flows through the second air-flowing channel 18b of both sides of said area 22.

As shown in fig.8, a check valve 5 is inserted into an individual air-inflatable part 4 through a non-bonded area 12a of a part of the bonded area 12. The edge of the opening 16 of said check valve 5 is bonded with the edge of said non-bonded area 12a at a bonded area 12b. Thus, a check valve 5 is attached inside to each of the individual air-inflatable parts 4

Consequently, each of said individual air-inflatable parts 4 is associated with the air-supplying passage 2 through the openings 16, 17 of a check valve 5 by way of the first air-flowing channels 18a, and the second air-flowing channels 18b. Said individual air-inflatable parts 4, thus arranged along the air-supplying passage 2 and formed parallel each other, are able to be associated only through each channel of said check valve 5.

As shown in fig.1 as a plan view, in this embodiment, a space-making fold 6 is formed across the individual air-inflatable parts 4 in each of the two divided portions of the air-inflatable section 3. A space-making fold 6 is consisted of two lines with a uniform interval L1 by heat-bonding partially at each of the individual air-inflatable parts 4. Both of the space-making folds in the air-inflatable section 3 are arranged to allow air flow by way of a partial bonded point 6a and a small air-supplying passage 6b at each of the individual air-inflatable parts 4.

The formation of the space-making fold is good with for one line. In this case, however, each of individual air-inflatable parts needs to be formed to be able to be bulged up in order to make a space 29, mentioned later, inside the buffer packing bag.

In this embodiment, a bending fold 7 is formed in one of the two portions without air-supplying passage 2 of the air-inflatable section 3 across each of individual air-inflatable parts 4 with a uniform interval L2 from a closer one of two space-making folds 6, 6. The bending fold 7 is arranged to allow air flow by way of a partial bonded point 7a and a small air-supplying passage 7b in each of the individual air-inflatable parts 4.

In fig. 1 as a plan view, two cutting notches 23a, 23b are respectively provided on the heat-bonded areas 9, 11 of the length sides of the base 1 in order to tear and deflate the bag by releasing air from the individual air-inflatable parts 4 when the bag in this embodiment is abandoned after used,

This embodiment in figs.1 and 9 employs another way of deflation without use of the notches by detaching an easy-releasable tape 25 from tiny holes 24, which are linearly made on either surface of the air-inflatable parts 4. When the bag is used, said tiny holes 24 must be sealed by said easy-releasable tape 25 and heat-bonded around heat-bonding area 26 on each of said tiny holes 24 to make sure of anti-deflation.

As shown in fig. 9, in deflation, the easy-releasable tape 25 is detached from the bag to release air through each of said tiny holes 24. In the same drawing, the reference numeral 26' designates transcribed trace of the heat-bonded area 26 on the easy-releasable tape 25 after the removal of said tape 25 from an individual air-inflatable part 4.

A good point in this way of deflation is that even after deflation the buffer packing bag can be reused as it is by sealing the tiny holes 24 with the easy-releasable tape 25 again. As said easy-releasable tape 25, different kinds of material can be used, such as a tape with polyethylene film stuck to extensible film of polyester used as a base.

Use of either transparent or translucent sheet of plastic film as the base 1 and the check valves 5 is good enough for making a buffer packing bag and visible inside of the bag in inflation of the bag as described later. On the contrary, using an opaque sheet of plastic film can keep invisible inside the bag. The sheet used for the bag will depend on what is to be contained in the bag.

In fig.2, the buffer packing bag is folded inward from both width sides of the base 1. The space-making folds 6, formed to make two lines in each of the two portions of the air-inflatable section 3 are exactly overlapped as spot to spot in the portions. The overlapped areas along the length sides are heat-

bonded except for the area of the air-supplying passage 2 to make a loading slit 28 between the meeting ends of the width sides.

Descriptions below are the state of use of a buffer packing bag as structured above and what the effect is.

When air is let in with pressure using a short injection pipe P, for example, fitted tight at the air inlet 13 of the air-supplying passage 2, the air flows through the check valves 5 into each of the individual air-inflatable parts 4, which get bulged accordingly.

Even though the bag has multiple heat-bonded spots for the space-making folds 6 and a bending fold 7 in each of the individual air-inflatable parts 4, the provision of the clearance 6b, 7b on both sides of respective partial bonded spots 6a, 7a allows air flow through said clearance 6b, 7b to make sure of inflation of the bag.

At this point, the heat-bonded areas 27 of the overlapped sections of the base 1 are provided along both of the length sides of the base 1. The buffer packing bag as bulged with air theoretically makes a box-shaped space 29 with a depth (height) corresponding to the interval L1 between the space-making folds 6, shown in figs. 3, 4, 5.

As a result, when the article A with an edgy and flat cubical form and of a hard material like a portable DVD player is loaded in the bag, the content is smoothly inserted or removed through the loading slit 28 without damaging the bag.

The loading slit 28, as fig. 5, 6 show, can be open wide as the air-inflatable section 3 is folded outward at the bending fold 7, and make the article A be inserted or removed through the slit more smoothly.

The article A in the bag is protected from unexpected coming out of the bag when the loading slit 28 is shut by folding inward at the bending fold 7 as the bag naturally is.

The individual air-inflatable parts 4 are separately arranged like other published buffer packing bags. Damage of individual air-inflatable parts 4 doesn't almost affect the bag on the cushioning effect as a whole. Furthermore, a check valve 5 has an inverted V-shaped bonded area with the top 20 directing to the opening 16 in the check valve body 19, and a linear heat-bonded area 22 from under the middle of said inverted V-shaped bonded area 21. The provision of both bonded areas 21, 22 avoid backward air flow in each of the individual air-inflatable parts 4.

(Embodiment 2)

With the previous embodiment, the base 1 of the flat buffer packing bag is folded inward from both width sides (heat-bonded areas 8, 10) along the length side of the base 1 lapped one upon another. In the present embodiment, the base 1 of the flat buffer packing bag is folded inward from both width sides (heat-bonded areas 8, 10) along the length side of the base 1 to almost touch each other remaining a slight aperture between the two sides after heat-bonding the area 27. The aperture forms a loading slit 28 for the article A to be inserted or removed. Fig.10 shows the inflated state of the individual air-inflatable parts 4 in this embodiment, wherein the gap D1 between the width sides is designed to be substantially zero when the base 1 is folded before inflation. With this embodiment likewise, a space 29 is formed by two space-making folds 6, so that the article A with a thick form is easily inserted or removed by bending the bag at bending fold 7 to make the loading slit 28 open wide.

(Embodiment 3)

The base 1 of the flat buffer packing bag is folded inward from both width sides (heat-bonded areas 8, 10) along the length side of the base 1 to oppose each other with a certain breadth between the two sides after heat-bonding the area 27. The aperture forms a loading slit 28 for the article A to be inserted or removed. Fig.11 shows the inflated state of the individual air-inflatable parts 4 in this embodiment, wherein both width sides remain apart with a certain gap D2 to provide a loading slit 28. The gap D2 differs from an interval formed between both width sides when the base 1 is folded before inflation. The breadth of the gap D2 in this embodiment makes the article A be inserted or removed more easily than the embodiment in fig.10. The article A, however, is protected from unexpected coming out of the bag because of the containment in the space 29 with the frontal, rear, right, left, upper and lower faces (6 plane surfaces) except for the loading slit 28.

(Embodiment 4)

Fig.12, based on the arrangement of the previous embodiment 2, shows that a flat flap 30 is formed next to the outward side of the heat-bonded area 10, covering the heat-bonded area 8. The flap 30 has an adhesive layer 31, on which a peeling paper 32 is set, attached along the width sides on the inner surface. With the article A in the space 29, the loading slit 28 is sealed along

the surface of the individual air-inflatable parts 4 by the flap 30 after removing the peeling paper 32 on the adhesive layer 31. Fig.13 illustrates the base 1 of the buffer packing bag in this embodiment. The adhesive layer 31 and peeling paper 32 are provided along the width side of the flap 30, which is formed next to the heat-bonded area 10a at the edge of the width side of the base 1. The provision of the adhesive flap 30 keeps the surer containment of the article A in the space 29, which makes it possible without using a packing carton.

(Embodiment 5)

Fig.14 in the embodiment shows a transcription layer 33 is attached on the outer surface of the individual air-inflatable parts 4 to prevent extraction or be understandable what happened to the bag. This embodiment is illustrated in figs.15 and 16, the former showing the folded state of the base 1 of the flat buffer packing bag and the latter showing the partial enlarged cross sectional view of same state. On the outer face 4a of the individual air-inflatable part 4 which is opposite to the adhesive layer 31 of the flap 30, the transcription layer 33 is laid wider than the adhesive layer 31 along the width side of the individual air-inflatable parts 4. The transcription layer 33 is composed of a sheet material 35 stuck to the outer surface 4a by adhesive 34 and a transcription material 36 which is capable of ply separation in respect of said sheet material 35. After the peeling paper 32 is detached from the flap 30, the adhesive layer 31 attached to the transcription layer 33, the transcription material 36 is conveyed to the adhesive layer 31 by the ply separation in respect to the sheet material 35. The flap 30 cannot be re-attached to the outer face of the individual air-inflatable part 4 after the transcription material 36 is transcribed. In consequence, use of a transcription material 36 with printed surface on it helps understand whether the flap is ever detached. The transcription layer 33 may be made of film material instead of the sheet material 35, or may be good enough to employ a directly printed layer as a transcription layer on the outer surface of the individual air-inflatable parts 4.

In the present embodiment as described above, the packing bag is sealed by the adhesive layer 31 on the flap 30 which is attached to the transcription layer 33. In case the transcription layer 33 is removed as a part or whole, thereby resulting in the printed layer being transcribed to the adhesive layer 31 of the flap 30, a look at the bag can be understandable that the bag is

opened in transition, so a prevention of extraction or a change of contents is expected.

The present invention is not limited to the main preferred embodiments as described above. Variations in design should be permissible within the scope for the attainment of the object of the present invention and of the burden of the present invention, and also contained in the claims of the present invention.

The arrangement and use of the present invention as mentioned above have the following useful effects.

In accordance with the invention as defined in claims 1 and 2, when a buffer packing bag is bulged with air, a wide opening of the bag and a space of desired depth (height) and width for the article to be contained therein is automatically formed in the bag. Any article can be inserted or removed out of the packing bag without difficulties. The buffer packing bag protects an article such as electric appliances with hard and edgy shape and noticeably increases a buffer effect.

In accordance with the invention as defined in claim 3, besides the effect above, the opening of the bag is able to open wide by folding the bag outward at the bending fold for the article to be inserted or removed easily.

In accordance with the invention as defined claim 4, since the opening of the bag is normally shut by meeting of both divided portions of the air-inflatable section as the bag naturally is, the content is protected from unexpected coming out of the bag, which can avoid the necessity of providing an additional flap accordingly.

In accordance with the invention as defined claims 5 and 6, besides the effect of the claim 4 as mentioned above, providing an adhesive flap makes sure of containing the article in the space of the bag and make it possible without using a packing carton.

In accordance with the invention as defined claim 7 or 9, besides the effect of the claim 5 as mentioned above, a transcription layer is made to be detachable as a part or whole to be attached to the adhesive layer when the bag is opened after the bag is shut by attaching the transcription layer to the adhesive layer. In case the bag is opened in transportation, a look at the bag can be understandable that the bag is opened that a prevention of extraction or a change of contents is expected.

In accordance with the invention as defined claims 10 and 11, besides

the effect of the claims 1 to 3 as mentioned above, the bag can contain a thick article without difficulty by making the loading slit open wide.

In accordance with the invention as defined claims 12, besides the effect of the claim 1 as mentioned above, use of either transparent or translucent sheet of plastic film makes visible of a whole inside of the bag in inflation from the outside.

In accordance with the invention as defined claims 13, the containing space consisted of the first and second containing portions is formed in inflation by letting air in to make the opening between both containing portions for taking in or out of an article. Folding the bag outward at the bending fold makes the opening wide open for an article to be inserted or removed smoothly.

What is claimed is:

1. A buffer packing bag comprising a base 1 made of two plastic films placed one on another and heat-bonded at predetermined areas and spots, the base having a flat air-supplying passage 2 with an air inlet 13 formed along one of sides of the base 1 and a flat air-inflatable section 3 formed beside said air-supplying passage 2, characterised in that

said flat air-inflatable section 3 being divided into multiple individual air-inflatable parts 4 formed by heat-bonded lines running parallel to the length sides;

a flat check valve 5 of plastic film in each of the individual air-inflatable parts 4 functioning to allow and stop air flow between each of the individual air-inflatable parts 4 and the air-supplying passage 2;

an air-flowing space-making fold 6 formed in both sides of said air-inflatable section 3 formed as at least one line along the length sides of the base 1 by heat-bonding partially with a predetermined interval crossing each of individual air-inflatable parts 4 in order to make a containing space 29 for an article A to be protected;

a loading slit 28 for said article A formed on the base 1 of the bag by folding inward from both width sides along the length side of the base 1 and heat-bonding both of the overlapped length sides of the base 1 except for the air inlet 13 of the air-supplying passage 2, the loading slit for an article appearing between both width sides along the length side of the base,

wherein the air-inflatable section 3 of the bag is inflated by letting air in with pressure at said air inlet 13 through the air-supplying passage 2.

2. The buffer packing bag as defined in the first aspect, characterized in that an air-flowing space-making fold 6 in both sides of said air-inflatable section 3 is formed as at least one line along the length sides of the base 1 by heat-bonding partially with a predetermined interval crossing each of individual air-inflatable parts 4 in order to make a containing space 29 for an article A to be protected.

3. The buffer packing bag as defined in the first or second aspect, characterized in that a bending fold 7 is formed substantially parallel to and between the space-making folds 6 on the air-inflatable section 3 and formed by heat-bonding partially to allow air flow in each of the individual air-

inflatable parts 4.

4. The buffer packing bag as defined in any of the first to third aspects, characterized in that a loading slit 28 for an article A to be protected is formed by folding inward from both width sides along the length side of the base 1 to overlap one another and heat-bonding both of the overlapped length sides of the base 1.

5. The buffer packing bag as defined in the fourth aspect, characterized in that a flat flap 30 is formed on an outer end edge of the base 1, wherein an adhesive layer 31 is provided inside on a side of said flat flap to cover said loading slit 28.

6. The buffer packing bag as defined in the fifth aspect, characterized in that said flat flap 30 is formed on the base 1, said flat flap 30 and the air-inflatable section 3 being separated from each other by heat bonding.

7. The buffer packing bag as defined in the fifth aspect, characterized in that a transcription layer 33 which can be transcribed to said adhesive layer 31 is provided on the outer surface of the air-inflatable section 3 opposing to said flat flap 30.

8. The buffer packing bag as defined in the seventh aspect, characterized in that said transcription layer 33 is made of sheet or film material, or a printing layer printed directly on the outer surface of the air-inflatable section 3, whereby when said adhesive layer 31 on said flat flap which previously has been attached to said transcription layer 33 to cover the bag is opened, said transcription layer 33 is removed partially or wholly and remains attached to said adhesive layer.

9. The buffer packing bag as defined in the eighth aspect, characterized in that the transcription layer 33 made of said sheet or film material is formed of a multi-layer material the layers of which may be separated.

10. The buffer packing bag as defined in any of the first to third aspects, characterized in that an opening formed by folding the flat base 1 with both

of said width sides along the length sides of the base 1 and to almost touch each other between both meeting sides and the end edges laid opposite to each other between both of said heat bonded sides, is said loading slit 28 for taking in or out of said article A contained.

11. The buffer packing bag as defined in any of the first to third aspects, characterized in that said loading slit 28, formed by folding the flat base 1 and placing each of said width sides oppose to each other with a certain breadth of gap remaining, serves as an opening for inserting or removing said article A.

12. The buffer packing bag as defined in the first invention, characterized in that said base 1 is constituted by a transparent or translucent plastic film.

13. A buffer packing bag, characterized in that the bag is comprised of:
a containing space 29 for an article A to be protected with a first and a second containing portion formed therein; and
a loading slit for inserting or removing said articles, the containing space, the first and the second containing portions comprising a base 1 made of plastic films placed one on another and heat bonded along length sides thereof, the base 1 including a plurality of individual air-inflatable parts 4, said individual air-inflatable parts 4 being formed parallel to each other by heat-bonding the base 1 at multiple spots and being inflated by air,
said containing portions being pocket-shaped with an opening and defined by said loading slit, said opening positioned between an edge of each of the pocket-shaped portions,
a part of the opening being the loading slit, the edges of the pocket-shaped portions being adjacent, making the first and the second containing portions face each other,
a bending fold 7 being provided in the base opposite to said opening, said bending fold formed by partially heat-bonding the base in a direction crossing the air-inflatable parts, the partial heat bonding allowing an air flow when the air-inflatable parts are inflated by air, thus inflating said buffer packing bag,
wherein the first containing portion contains a part of the article before the second containing portion is folded toward the first containing portion to

contain a remaining part of the article.

14. The buffer packing bag as defined in the thirteenth aspect, characterized in that each of air-inflatable parts 4 constituting the first and second containing portions is provided with a single air-supply passage 2, through which air is provided, a check valve 5 in each of the air-inflatable parts 4 allowing and stopping the air flow between the single air-supplying passage 2 and each of the individual air-inflatable parts 4.