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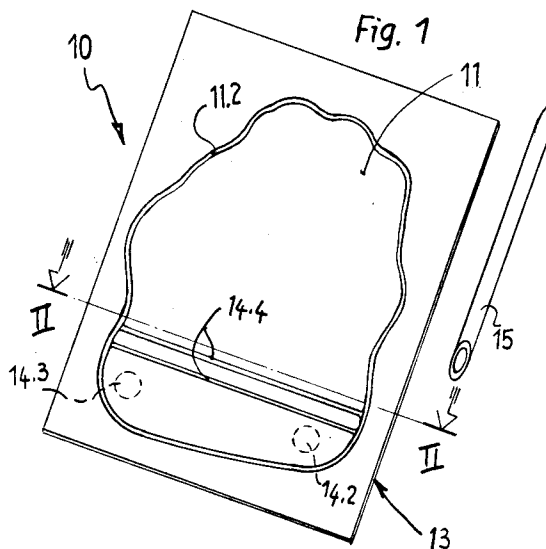
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I- 20129 Milano (IT)(54) **Model that can be pneumatically inflated in the form of an air cushion.**

(57) Model that can be pneumatically inflated in the form of an air cushion, comprising two laminar parts, joined in mutual superposition, or in other words a pneumatically inflatable bag (11) that is flat and exhibits two sheet-like walls (11.1), made for example of a flexible plastic film, welded together, for example heat-welded, along a continuous outline (11.2) defining the profile of the model proper (11.3), and in addition a backing board (12) of a poorly flexible or stiff material, such as card.

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The present invention relates to a model that can be pneumatically inflated in the form of an air cushion.

Pneumatically inflatable models are known. Such models are formed by an air bag made of, for example, two flexible plastic sheet-like films placed one on top of the other and hermetically joined, for example by means of heat-welding, along a continuous border defining the profile of the model. In addition, on at least one of said sheet-like films a figure is printed, inscribed within said continuous outline. Pneumatically inflatable models of this kind have valve means for pneumatic inflation which, by means of, for example, an inflator tube, allow air under pressure to be blown into said air bag, for example, through the mouth, in order to inflate and maintain pneumatically inflated said bag, in such a way as to give said model a pleasing three-dimensional aspect. However, the abovementioned models are quite flexible when deflated and are therefore inconvenient and difficult to process and handle during the industrial operations following their manufacture. Besides, the lack of suitable stiffness in the deflated state represents a limitation in the presentation and use of the models in the flat form (that is before they are pneumatically inflated) in comparison with conventional flat models, printed, for example, on pieces of stiff card.

From an awareness of the disadvantages set out above, it is the object of the present invention to overcome them.

With this object in view, the present invention provides a model that is pneumatically inflatable in the form of an air cushion, the essential characteristic of which is the subject of Claim 1, which should be regarded as incorporated here in its entirety.

Further advantageous characteristics are described in the subclaims, which should also be regarded as incorporated here in their entirety.

There now follows a detailed description of the present invention with reference to the accompanying illustrative drawings, in which:

- Fig. 1 is a perspective view of the model that can be pneumatically inflated in the form of an air cushion, according to the present invention, as presented for use in the flat form and with an inflator tube;
- Fig. 2 is a view in transverse cross section along the line II-II of Fig. 1;
- Fig. 3 is a view similar to that in Fig. 1, in which however the inflatable air bag in the form of a pneumatic cushion, is shown separately from the rest of the model;
- Fig. 4 is a perspective view showing said air bag inflated in the form of an air cushion by means of the inflator tube inserted through air

valve inflating means, and in which said bag is shown rotated through 180° with respect to said Fig. 3;

- Fig. 5 is a view taken in longitudinal cross-section along the line V-V in Fig. 4.

In the drawings, 10 (Fig. 1) is a general reference for the model that can be pneumatically inflated in the form of an air cushion, according to the present invention.

Essentially, the model 10 comprises two laminar parts, joined in mutual superposition, or in other words comprises a pneumatically inflatable bag 11 that is flat and exhibits two sheet-like walls 11.1, made for example of a flexible plastic film, such as polyvinyl chloride, welded together, for example high frequency heat-welded, along a continuous outline 11.2 defining the profile of the model proper 11.3, and also comprises a backing board 12 of a poorly flexible or stiff material, such as card, in such a way that said two laminar parts 11, 12, joined together in superposition, are sufficiently stiff for the easy and convenient performance of the industrial processing and handling operations following the manufacture of the model itself, and have an appearance and strength that are agreeable and appropriate for said air bag 11 to be used in the deflated state in the same way as a conventional flat model.

Advantageously, the mutual joining of said laminar parts 11, 12 is brought about through the blanking of the perimetrical border of said superposed parts around a peripheral, for example quadrilateral, outline 13 in which is inscribed said continuous outline 11.2 of the air bag 11 defining the profile of the model 11.3.

In said air bag 11, air valve means 14 are provided, comprising a sheet-like intermediate flap 14.1 (Fig. 5), made for example of a plastic, such as polyvinyl chloride, hermetically heat-welded to one of the walls 11.1 of said bag, and two through holes 14.2, 14.3 formed in that one of said walls 11.1 to which the flap 14.1 is heat-welded, and in said flap 14.1, respectively, and offset from each other. 14.4 indicates transverse lines where the intermediate flap 14.1 is heat-welded to one wall 11.1 of the air bag 11.

As is clearly shown by Figures 4 and 5, there may easily be inserted through said valve means 14 into the air bag 11 an inflator tube 15 whereby air may be blown in at pressure, for example through the mouth, so as pneumatically to inflate the bag 11, or model proper 11.3, in the form of an air cushion, after removing said bag from the rest of the model 10 (Fig.3). On this point it will be noticed that, by virtue of the operation of heat-welding together the walls 11.1 of the air bag 11, a continuous break line is preformed along the continuous outline 11.2 allowing said bag 11 to be

separated from the cast-off 11.4 (Fig. 3), which is joined by the blanking operation to the backing board 12 and stays stuck to said board after the air bag 11 has been removed.

It will also be noticed that, for convenience of working, the through hole 14.2 in the wall 11.1 is made through the backing board 12 during the blanking operation. In Fig. 3, 12.1 indicates the corresponding through hole in the backing board 12.

As is clear from the above, the model according to the invention comes to the user in the form of a conventional flat model of sufficient stiffness, thanks to its structure in two laminar parts, one of them a backing board, while allowing the possibility of being pneumatically inflated in the form of an air cushion, in its air bag part, for greater play appeal.

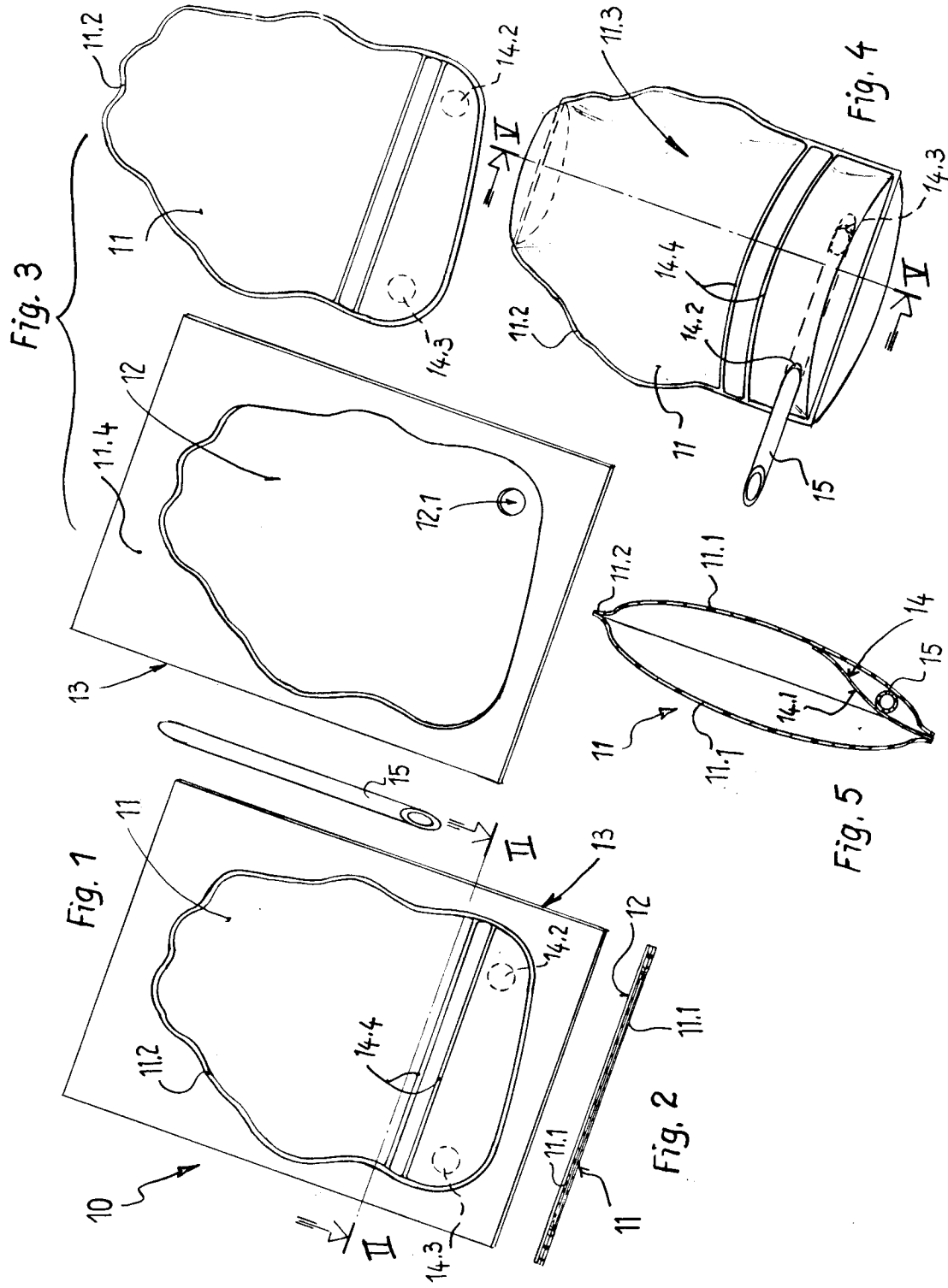
Naturally, many variants may be made, without thereby departing from the scope of the invention.

Claims

1. Model that can be pneumatically inflated in the form of an air cushion, characterised in that it comprises two laminar parts, joined in mutual superposition, or in other words a pneumatically inflatable bag (11) that is flat and exhibits two sheet-like walls (11.1), made for example of a flexible plastic film, welded together, for example heat-welded, along a continuous outline (11.2) defining the profile of the model proper (11.3), and in addition a backing board (12) of a poorly flexible or stiff material, such as card, in such a way that said two laminar parts (11, 12) joined together in mutual superposition are sufficiently stiff for easy and convenient performance of the industrial processing and handling operations following the manufacture of the model itself, and have an appearance and strength that are agreeable and appropriate for said air bag (11) to be used in the deflated state, in the same way as a conventional flat model, while said air bag (11) is separable from the rest of the model (cast-off 11.4, board 12) by breaking along said continuous outline (11.2) defining the profile of the pneumatically inflatable model proper (11.3).
2. Model that can be pneumatically inflated in the form of an air cushion according to Claim 1, characterised in that the mutual joining of said laminar parts (11, 12) is brought about through the blanking of the perimetrical border of said superposed parts around a peripheral, for example quadrilateral, outline (13), in which is inscribed said continuous outline (11.2) of the air bag (11) defining the profile of the model

proper (11.3).

3. Model that can be pneumatically inflated in the form of an air bag according to Claim 1 or 2, characterised in that in said air bag (11) air valve means (14) are provided, comprising a sheet-like intermediate flap (14.1), made for example of plastic, hermetically heat-welded to one of the walls (11.1) of said bag, and two through holes (14.2, 14.3) formed in one of said walls (11.1) and in said flap (14.1), respectively, and offset from each other, in such a way that there may easily be inserted through said valve means (14) into the air bag (11) an inflator tube (15) whereby air may be blown in under pressure, for example through the mouth, so as pneumatically to inflate said bag (11), or model proper (11.3), in the form of an air cushion, after removing said bag from the rest (cast-off 11.4, backing board 12) of said model (10).





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EUROPEAN SEARCH REPORT

Application Number

EP 91 20 2883

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.5)
A	US-A-4 547 168 (BLACKSBERG ET AL.) * column 2, line 44 - line 65 * * column 3, line 37 - line 48; figures * ---	1,3	A63H27/10 A47C27/08
A	US-A-2 515 804 (SHUFER) * column 1, line 43 - column 3, line 12; figures * ---	1	
A	US-A-2 028 797 (MILLER) * column 1, line 14 - line 18 * * column 2, line 1 - line 22; figures * ---	1	
A	US-A-4 983 138 (MCGRATH) * abstract; figures * ---	1,3	
A	FR-A-2 337 672 (THIMONNIER S.A.) -----		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			A47C A63H B65D
Place of search THE HAGUE		Date of completion of the search 09 JUNE 1992	Examiner DE COENE P. J. S.
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	