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(54) **CLAMP FOR SEALING BAG BODIES FOR HEATING**

(57) The present application relates to the technical field of sealing clamps, and discloses a clamp for sealing bag bodies for heating, including an integrally formed clamp body 1, wherein one or more clamping grooves 2 penetrating through and formed on one side in a length direction. The clamp body is microwave-heatable, made of a material suitable for microwave oven heating. During use, bag mouths of the sealed bags are folded to create a

certain thickness and fixed in the clamping grooves, allowing the sealed bags to be securely sealed and heated in a microwave oven. This design makes the clamp convenient to use, energy-efficient, and environmentally friendly. Additionally, the clamp can be recycled, further enhancing its environmental friendliness and reducing costs.

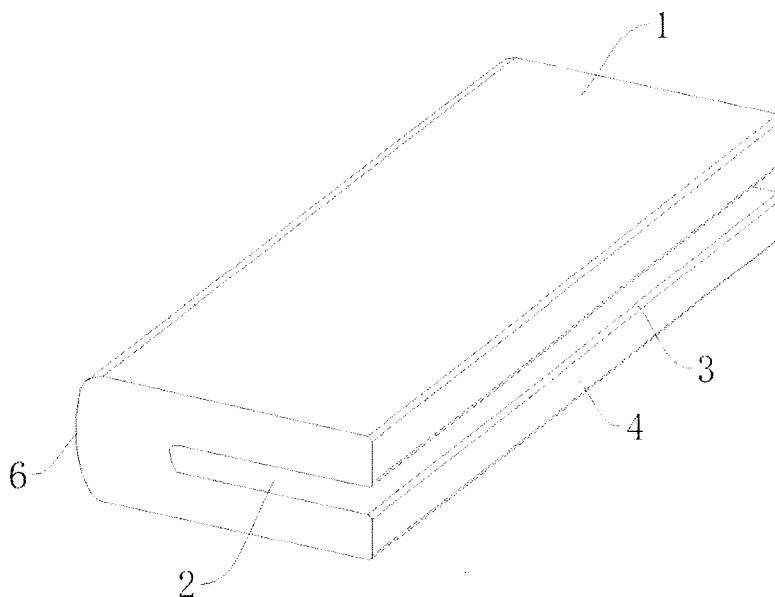


Fig. 1

Description

Technical Field

[0001] The present application relates to the technical field of sealing clamps, in particular to a clamp for sealing bag bodies for heating.

Background Art

[0002] A microwave sealable bag has become a new favorite in the kitchen in recent years. It is made of a special heat-resistant material and can withstand the high temperature of a microwave oven without melting or releasing harmful substances. It combines the portability of a sealed bag and a heating function of the microwave oven, thereby bringing great convenience to modern, busy lifestyles..

[0003] For facilitating use, the microwave sealable bag is usually a disposable bag and is designed with a sealing strip fixed with the sealed bag to prevent food from overflowing or polluting the microwave oven during heating. Therefore, a material for producing the sealed bag is greatly consumed, the production process is relatively complicated, and the sealing strip is discarded after the sealed bag is used, which is not energy-saving or environmentally friendly enough.

Summary of the Invention

[0004] A technical problem to be solved by the present application is to design a clamp for sealing bag bodies for heating. The clamp and the bag bodies are independent of each other; during use, the bag bodies can be clamped and sealed by the clamp; and after use, only the bag bodies need to be discarded, but the clamp can be recycled, so that sealed bags and the clamp are more environmentally friendly in use.

[0005] In order to solve the above-mentioned problem, the present application provides a clamp for sealing bag bodies for heating, including an integrally formed clamp body, wherein one or more clamping grooves penetrate through and are formed in one side of the clamp body in a length direction; and the clamp body is a microwave-heatable clamp body made of a material applicable to microwave oven heating.

[0006] Preferably, the clamp body is a wooden clamp body or a bamboo clamp body.

[0007] Preferably, a vertical section of each of the clamping grooves in the length direction is linear.

[0008] Preferably, a vertical section of each of the clamping grooves in the length direction is curved.

[0009] Preferably, a filleted corner is disposed on an edge of an opening of each of the clamping grooves.

[0010] Preferably, guide slopes inclined from outside to inside are respectively located on opposite groove walls at an opening of each of the clamping grooves.

[0011] Preferably, anti-skid protrusions are positioned

on opposite groove walls at an opening of each of the clamping grooves.

[0012] Preferably, the depth of each of the clamping grooves is 1/2 to 4/5 of the width of the clamp body. Preferably, the side of the clamp body opposite the clamping grooves is an arc surface.

[0013] Compared with the prior art, the present application includes at least one of the following beneficial technical effects:

- 10 The clamp and sealed bags in the present application are independent of each other; during use, bag mouths of the sealed bags are folded first, the bag mouths have a certain thickness after being folded and can be fixed after being inserted into the clamping grooves, and thus, the sealed bags can be sealed for heating; the clamp body does not need to be additionally provided with a fixing structure, and the sealed bags do not need to be provided with sealing strips, either, so that the material is saved, and energy saving and environmental friendliness are achieved. In addition, the one or more clamping grooves capable of clamping a plurality of sealed bags at the same time are formed in the clamp body, and thus, the heating efficiency of food and the use convenience of the clamp are improved. After use, only the sealed bags need to be discarded, but the clamp can be recycled, so that the sealed bags and the clamp are more environmentally friendly in use, and the use cost is reduced.

Brief Description of the Drawings

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[0014] In order to describe the technical solutions in the embodiments of the present application more clearly, the accompanying drawings required for describing the embodiments will be briefly introduced below. Apparently, the accompanying drawings in the following description show only some embodiments of the present application, and those of ordinary skill in the art can still derive other accompanying drawings from these accompanying drawings without creative efforts.

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Fig. 1 is a schematic diagram of an overall structure of a clamp for sealing bag bodies for heating in an embodiment of the present application;

Fig. 2 is a schematic diagram of an overall structure of a clamp for sealing bag bodies for heating in one embodiment of the present application;

Fig. 3 is a schematic diagram of an overall structure of a clamp for sealing bag bodies for heating in another embodiment of the present application;

Fig. 4 is a schematic diagram of an overall structure of a clamp for sealing bag bodies for heating in a further embodiment of the present application; and Fig. 5 is a schematic diagram of an overall structure of a clamp for sealing bag bodies for heating in yet another embodiment of the present application.

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[0015] Description for reference numerals in the accompanying drawings: 1, clamp body; 2, clamping

groove; 3, filleted corner; 4, vertical plane; 5, guide slope; and 6, arc surface.

Detailed Description of the Invention

[0016] Technical solutions in the embodiments of the present application will be described clearly and completely below in conjunction with the accompanying drawings in the embodiments of the present application. Apparently, the described embodiments are a part of the embodiments of the present application, not all the embodiments. Based on the embodiments in the present application, all other embodiments obtained by those of ordinary skill in the art without creative efforts shall fall within the protection scope of the present application.

[0017] It should be understood that when used in the present description and the appended claims, terms "include" and "contain" indicate the existence of described features, entireties, steps, operations, elements and/or components, but do not exclude the existence or addition of one or more other features, entireties, steps, operations, elements, components and/or sets thereof.

[0018] It should be further understood that the terms used in the description of the present application are only intended to describe specific embodiments, rather than to limit the present application. As used in the description and the appended claims of the present application, a singular form "one", "a" or "the" is intended to include a plural form unless other situations are clearly indicated in the context. It should be further understood that the term "and/or" used in the description and the appended claims of the present application refers to one or any combination or all possible combinations of related listed items and includes these combinations.

[0019] Referring to Fig. 1 to Fig. 5, an embodiment of the present application provides a clamp for sealing bag bodies for heating, and the clamp is capable of clamping bag mouths of sealed bags and is placed into a microwave oven for heating together with the sealed bags to prevent food from overflowing out of or polluting the microwave oven during heating. Specifically, the clamp includes an integrally formed clamp body 1, and the length L of the clamp body 1 is 10-20 cm, so that a user holds the clamp body 1 in hand for use; one or more clamping grooves 2 penetrate through and are formed in one side of the clamp body 1 in a length direction, and the bag mouths of the sealed bags only need to be inserted into the clamping grooves 2 after being folded. In the present embodiment, direction description is performed according to a state that the clamp is placed on a horizontal plane. The clamp body 1 is a microwave-heatable clamp body made of a material applicable to microwave oven heating.

[0020] Herein, the clamp and the sealed bags are independent of each other; during use, bag mouths of the sealed bags are folded firstly, the bag mouths have a certain thickness after being folded and can be fixed after being inserted into the clamping grooves 2, and thus, the

sealed bags can be sealed for heating; the clamp body 1 does not need to be additionally provided with a fixing structure, and the sealed bags do not need to be provided with sealing strips, either, so that the material is saved, and energy saving and environmental friendliness are achieved. In addition, the one or more clamping grooves 2 capable of clamping a plurality of sealed bags at the same time are formed in the clamp body 1, and thus, the heating efficiency of food and the use convenience of the clamp are improved. After use, only the sealed bags need to be discarded, but the clamp can be recycled, so that the sealed bags and the clamp are more environmentally friendly in use, and the use cost is reduced.

[0021] In a specific embodiment, the clamp body 1 is a wooden clamp body or a bamboo clamp body. A wooden material and a bamboo material are both natural and environmentally friendly materials which are resistant to high temperature and high pressure, not easy to deform and good in stability and durability so as to be recycled, and are incapable of volatilizing toxic substances so as to be safer when being used for food heating and sealing.

[0022] Referring to Fig. 2 to Fig. 5, in a specific embodiment, a vertical section of each of the clamping grooves 2 in the length direction is linear, which facilitates inserting the bag mouths of the sealed bags into the clamping grooves 2, so that the use convenience of the clamp is improved. In another embodiment, a vertical section of each of the clamping grooves 2 in the length direction is curved, allowing the bag mouths to be bent after being clamped by the curved clamping grooves 2, and thus, improving sealing effects of the sealed bags.

[0023] In a specific embodiment, two opposite sides at an opening of each of the clamping grooves 2 are vertical planes 4, a filleted corner 3 is disposed on an edge of an opening in the length direction of each of the clamping grooves 2, and thus, it is convenient for the bag mouths to slide into the clamping grooves 2 while avoiding scratches on hands of a person or the sealed bags by the edge of the opening. In another embodiment, guide slopes 5 inclined from outside to inside are respectively disposed on opposite groove walls at an opening of each of the clamping grooves 2, so that the bag mouths can be further guided, it is more convenient for the bag mouths to slide into the clamping grooves 2, and the use convenience of the clamp is further improved.

[0024] In a specific embodiment, one or more clamping grooves 2 are provided. In the present embodiment, one or two clamping grooves are provided, at the moment, the use effect of the clamp is the best. When one clamp groove 2 is provided, food in the sealed bags can be sufficiently heated; and when two clamping grooves 2 are provided, two different kinds of food can be heated at the same time, avoiding the situation that the food in the two sealed bags is stacked and heated unevenly.

[0025] In a specific embodiment, when a plurality of clamping grooves 2 are provided, the plurality of clamping grooves 2 are parallel to each other. A distance D1 between the two adjacent clamping grooves 2 is greater

than 2 mm, preventing the situation that the groove walls between the two adjacent clamping grooves 2 rupture due to the too small thickness while avoiding the clamp body 1 becoming too thick.

[0026] Further, the width D2 of each of the clamping grooves 2 is 2-8 mm. When the width D2 of each of the clamping grooves 2 is 2-8 mm, the folded bag mouths can be better clamped, and the bag mouths are not easy to break away from the clamping grooves 2, so that a fixing structure does not need to be additionally provided. At the same time, the depth D3 of each of the clamping grooves 2 is 1/2 to 4/5 of the width of the clamp body 1, and preferably, the depth D3 of each of the clamping grooves 2 is 2/3 of the width W of the clamp body 1. At the moment, the bag mouths can be sufficiently inserted into the clamping grooves 2, so that the stability of clamping the sealed bags by the clamp is improved, and groove walls away from the opening end of each of the clamping grooves 2 are less likely to rupture due to the too small thickness as well.

[0027] In a specific embodiment, an outer surface of a side, away from the clamping grooves 2, of the clamp body 1 is an arc surface 6. The arc surface 6 can be better fitted to a hand of a user, so that it is convenient for the user to hold the clamp body 1 in hand to clamp the sealed bags, and at the same time, it is not easy to scratch the hand of the user.

[0028] In a specific embodiment, anti-skid protrusions are respectively disposed on groove walls at two opposite sides at an opening of each of the clamping grooves 2. The anti-skid protrusions can be shaped like spaced protruding points or strips disposed in the length direction of each of the clamping grooves 2; and on the other hand, the anti-skid protrusions can be integrated with the clamp body 1 or made of silica gel. The bag mouths of the sealed bags are in contact with the anti-skid protrusions after being inserted into the clamping grooves 2, and the anti-skid protrusions can increase a friction force, so that the bag mouths are not easy to break away from the clamping grooves 2, and the stability of clamping the sealed bags by the clamp is further improved.

Claims

1. A clamp for sealing bag bodies for heating, **characterized by** comprising an integrally formed clamp body, wherein one or more clamping grooves penetrate through and are formed in one side of the clamp body in a length direction; and the clamp body is a microwave-heatable clamp body made of a material applicable to microwave oven heating.
2. The clamp for sealing bag bodies for heating of claim 1 or 2, **characterized in that** the clamp body is a wooden clamp body or a bamboo clamp body.
3. The clamp for sealing bag bodies for heating of claim

1 or 2, **characterized in that** a vertical section of each of the clamping grooves in the length direction is linear.

4. The clamp for sealing bag bodies for heating of claim 1 or 2, **characterized in that** a vertical section of each of the clamping grooves in the length direction is curved.
5. The clamp for sealing bag bodies for heating of claim 1 or 2, **characterized in that** a filleted corner is disposed on an edge of an opening of each of the clamping grooves.
6. The clamp for sealing bag bodies for heating of claim 1 or 2, **characterized in that** guide slopes inclined from outside to inside are respectively located on opposite groove walls at an opening of each of the clamping grooves.
7. The clamp for sealing bag bodies for heating of claim 1 or 2, **characterized in that** anti-skid protrusions are positioned on opposite groove walls at an opening of each of the clamping grooves.
8. The clamp for sealing bag bodies for heating of claim 1 or 2 **characterized in that** the width of each of the clamping grooves is 2-8 mm.
9. The clamp for sealing bag bodies for heating of claim 1 or 2, **characterized in that** the depth of each of the clamping grooves is 1/2 to 4/5 of the width of the clamp body.
10. The clamp for sealing bag bodies for heating of claim 1 or 2, **characterized in that** the side of the clamp body opposite the clamping grooves is an arc surface.

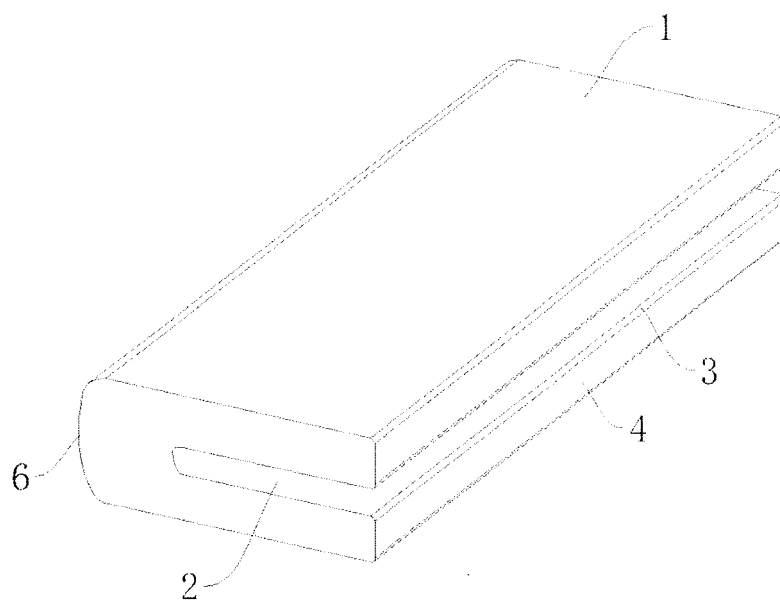


Fig. 1

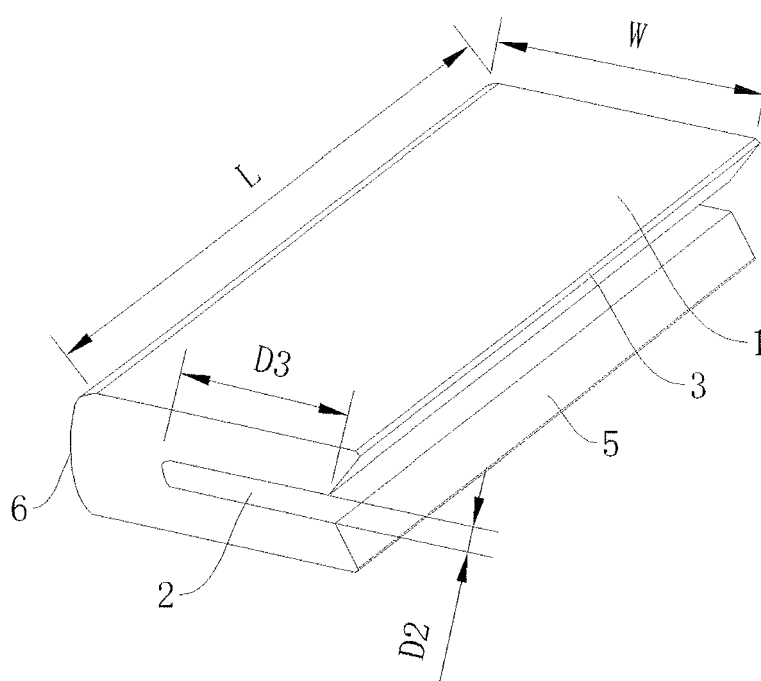


Fig. 2

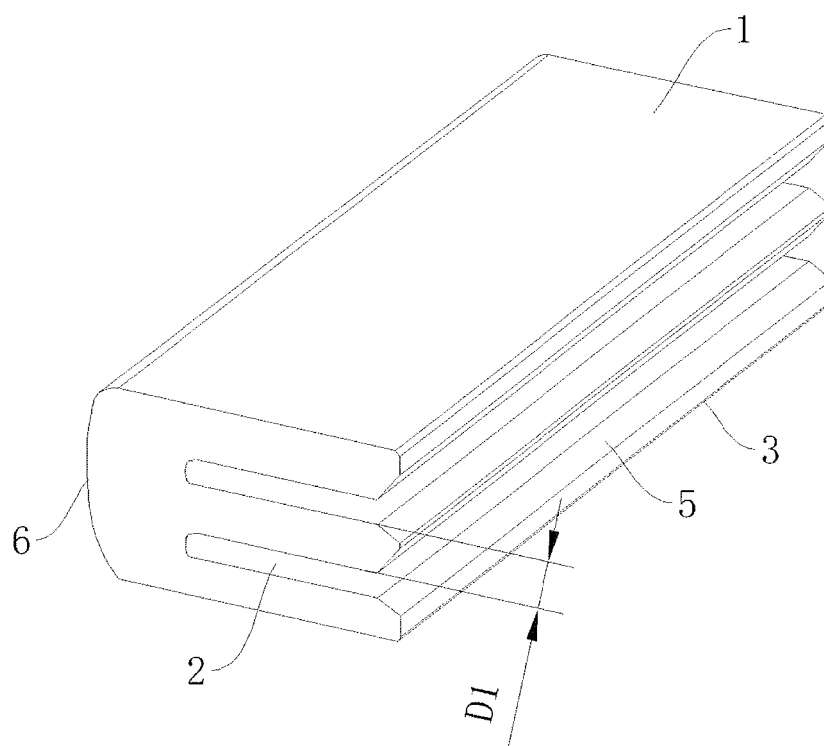


Fig. 3

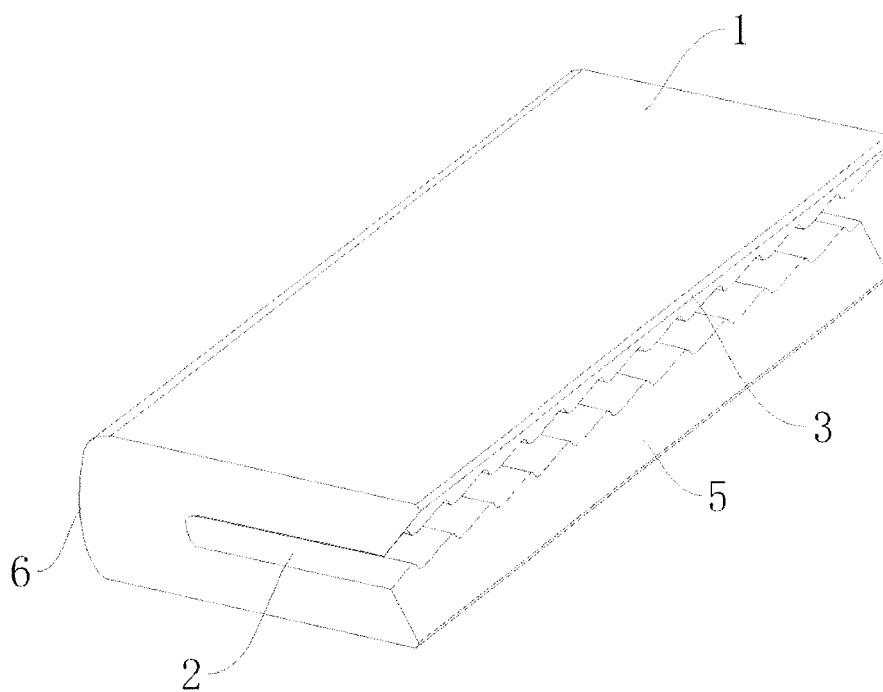


Fig. 4

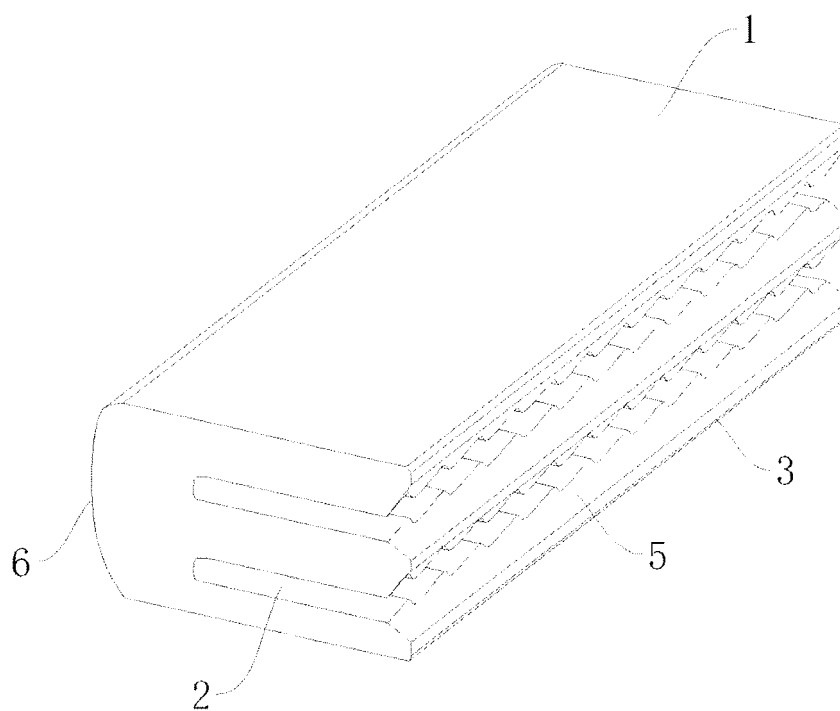


Fig. 5



EUROPEAN SEARCH REPORT

Application Number

EP 25 15 2061

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 5 435 648 A (BERKOFF WILLIAM [US]) 25 July 1995 (1995-07-25)	1,3,5-9	INV. B65D33/16
Y	* columns 32-38; figures 4,5,9,10,12 *	2,10	
A	-----	4	
Y	DE 94 03 402 U1 (POSSBERG DIRK [DE]) 11 May 1994 (1994-05-11)	2,10	
	* page 7, paragraph 3; figures *		

The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
Place of search		Date of completion of the search	Examiner
The Hague		23 May 2025	Serrano Galarraga, J
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			
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ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5435648	A	25-07-1995	NONE

DE 9403402	U1	11-05-1994	NONE

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