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(54) **A DRYER WITH A BAFFLE COMPRISING A RECEPTACLE FILLED WITH WATER**

(57) The present invention relates to a dryer comprising a drum; a baffle (1) which is attached onto the drum; an intermediate member (4) which enables the baffle (1) to be fixed onto the drum; a receptacle (3) which is attached onto the intermediate member (4), which is filled with water and which has a first opening (8) thereon; and a casing (2) which is fixed onto the receptacle (3), which has at least one second opening (9) overlapping with the first opening (8), and which covers the intermediate member (4) and the receptacle (3).

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Description

[0001] The present invention relates to a dryer comprising at least one baffle used for wrinkle removal.

[0002] If the laundry placed in the dryer in a wrinkled way is damp, the wrinkles are removed to some extent at the end of the drying process. In order to perform the wrinkle removal process more effectively and to increase the wrinkle removal level, water, steam, etc. is applied on the laundry to be dried.

[0003] In a state of the art embodiment, water is delivered into the drum by means of a nozzle.

[0004] In the state of the art European Patent Application No. EP3147403, a dryer is disclosed, comprising a baffle having a receptacle wherein a fluid is loaded to be delivered onto the laundry.

[0005] In the state of the art South Korean Patent Application No. KR100712271, a dryer is disclosed, comprising a receptacle which is disposed in the baffle and a lid which covers the receptacle and which has holes thereon.

[0006] The aim of the present invention is the realization of a dryer comprising a baffle which ensures that the water delivery into the drum is performed in a simple and efficient manner.

[0007] The dryer realized in order to attain the aim of the present invention, explicated in the first claim and the respective claims thereof, comprises a baffle which is attached onto the drum and which is fixed onto the drum by means of an intermediate member. The baffle comprises a receptacle which is attached onto the intermediate member and which is filled with water, and a casing which is fixed onto the receptacle, which has at least one opening thereon and which covers the intermediate member and the receptacle.

[0008] The intermediate member is a platform which is fixed on the drum, which moves with the drum and which forms a protrusion towards the center of the drum. There is at least one, and in the preferred embodiment, two rectangular recesses on the intermediate member. Thus, the receptacle, which is attached to the intermediate member, is centered on the intermediate member and the movement thereof on the intermediate member is prevented. The intermediate member is in the form of a rectangular prism with a truncated top and rounded short edges.

[0009] The receptacle is a container wherein water is filled by the user. In an embodiment of the present invention, the dryer comprises at least one first opening at the top of the receptacle which enables water to be filled therein. The first opening is in the form of a slit extending substantially along the receptacle. The form of the receptacle matches that of the intermediate member, and there are quadrilateral protrusions on the base of the receptacle, which are arranged on the intermediate member and which align with the recesses and enter the recesses when the intermediate member is placed thereon. In an embodiment of the present invention, there is an indicator on the side wall of the receptacle, which enables the monitoring of the level of the water filled into the receptacle. Said indicator is formed by making a part of the side wall transparent. Thus, the user can easily monitor how much water is filled into the water receptacle or whether there is water in the receptacle.

[0010] In an embodiment of the present invention, there is a quadrilateral barrier on the receptacle, surrounding the first opening. In this embodiment of the present invention, there is a sealing member between the receptacle and the casing, bearing against the inner walls of said barrier so as to surround the first opening on the receptacle. By means of the sealing member, it is ensured that the water in the receptacle exits only through the first opening on the receptacle and is directed towards the inside of the drum with the movement of the drum and therefore the baffle.

[0011] In another embodiment of the present invention, the indicator on the receptacle is manufactured by the blow molding method with its own water level.

[0012] In the embodiment of the present invention, the dryer comprises a casing in the form of a rectangular prism, with a truncated top and rounded short edges, which covers the intermediate member and the receptacle attached thereon as well as the sealing member and which has at least one second opening at the top thereof. There is a window on the casing that allows the indicator on the wall of the receptacle to be viewed. The edges of the top of the casing are inclined downward and the edges form the edge of the second opening. Thus, a groove the base of which is the second opening is formed at the top of the casing. Consequently, the second opening on the casing is located at a level below the apex of the casing. In this way, the filling of water in the receptacle is facilitated and the laundry sticking onto the baffle during the movement of the drum is prevented from closing the second opening. By means of said structure of the baffle, the instantaneous discharge of water from the baffle is prevented, and the water in the receptacle is allowed to slowly and homogeneously penetrate the laundry and turn into steam with hot air. The casing holds the intermediate member, the receptacle and the sealing member together.

[0013] In an embodiment of the present invention, the casing is fixed on the intermediate member and the receptacle by means of locking members. In this embodiment, the casing is locked to the intermediate member from the side walls thereof and is locked to the receptacle from the top.

[0014] In an embodiment of the present invention, the first opening and the second opening overlap. In this embodiment, the first opening is wider than the second opening. The water passing through the first opening is directed to the second opening by means of the sealing member and transferred into the drum.

[0015] In an embodiment of the present invention, the baffle is fixed to the drum by means of fixing members. In a version of this embodiment of the present invention,

screws are used as fixing members. In another version of this embodiment of the present invention, claws are used as fixing members. In this embodiment, the baffle can be easily attached to and detached from the drum by the user.

[0016] The water filled into the baffle by the user is enabled to slowly penetrate the laundry with the movement of the drum. Thus, the water transferred to the laundry via the baffle evaporates due to the hot air in the drum. The evaporating water ensures that the wrinkles on the clothes are removed. Moreover, with the effect of water and steam, bad odors on unwashed laundry are removed.

[0017] By means of the present invention, the water delivery into the drum is performed in a simple and efficient manner. Thanks to the new baffle design, with the rotation of the drum, it becomes possible to generate steam by sprinkling water on the laundry in a controlled manner, thus eliminating the odor of the laundry and minimizing wrinkles. By means of the baffle of the present invention, the water is enabled to more homogeneously penetrate the laundry. In addition, the worn clothes which have odors thereon are dried in a short time without the need to wash. Moreover, by means of the present invention, the laundry is refreshed, the wrinkles are removed and ironing can be performed with less effort.

[0018] A dryer realized in order to attain the aim of the present invention is illustrated in the attached figures, where:

Figure 1 - is the perspective view of a baffle.

Figure 2 - is the exploded view of the baffle.

Figure 3 - is the cross-sectional view of the baffle.

[0019] The elements illustrated in the figures are numbered as follows:

1. Baffle
2. Casing
3. Receptacle
4. Intermediate member
5. Sealing member
6. Fixing member
7. Locking member
8. First opening
9. Second opening
10. Indicator
11. Window
12. Recess
13. Protrusion
14. Barrier

[0020] The dryer of the present invention comprises a drum; a baffle (1) which is attached onto the drum; an intermediate member (4) which enables the baffle (1) to be fixed onto the drum; a receptacle (3) which is attached onto the intermediate member (4), which is filled with water and which has a first opening (8) thereon; and a casing (2) which is fixed onto the receptacle (3), which has at least one second opening (9) overlapping with the first opening (8), and which covers the intermediate member (4) and the receptacle (3) (Figure 2).

[0021] The intermediate member (4) is a platform which is fixed on the drum, which moves with the drum and which forms a protrusion towards the center of the drum. There is at least one, and in the preferred embodiment, two rectangular recesses (12) on the intermediate member (4). Thus, the receptacle (3), which is attached to the intermediate member (4), is centered on the intermediate member (4) and the movement thereof on the intermediate member (4) is prevented. The intermediate member (4) is in the form of a rectangular prism with a truncated top and rounded short edges (Figure 3).

[0022] The receptacle (3) is a container wherein water is filled by the user. In an embodiment of the present invention, the dryer (1) comprises at least one first opening (8) at the top of the receptacle (3) which enables water to be filled therein. The first opening (8) is in the form of a slit extending almost all along the receptacle (3). The form of the receptacle (3) matches that of the intermediate member (4), and there are quadrilateral protrusions (13) on the base of the receptacle (3), which are arranged on the intermediate member (4) and which align with the recesses (12) and enter the recesses (12) when the intermediate member (4) is placed thereon. In an embodiment of the present invention, the dryer comprises an indicator (10) on the side wall of the receptacle (3), which enables the monitoring of the level of the water filled into the receptacle (3). Said indicator (10) is formed by making a part of the side wall transparent. Thus, the user can easily monitor how much water is filled into the receptacle (3) or whether there is water in the receptacle (3).

[0023] In an embodiment of the present invention, the dryer comprises a barrier (14) in the form of a quadrilateral frame, on the receptacle (3), surrounding the first opening (8). In this embodiment of the present invention, the dryer comprises a sealing member (5) between the receptacle (3) and the casing (2), bearing against the inner walls of said barrier (14) facing the first opening (8) so as to surround the first opening (8) on the receptacle (3). By means of the sealing member (5), it is ensured that the water in the receptacle (3) exits only through the

first opening (8) on the receptacle (3) and is directed towards the inside of the drum with the movement of the drum and therefore the baffle (1).

[0024] In another embodiment of the present invention, the indicator (10) on the receptacle (3) is manufactured by the blow molding method with its own water level.

[0025] In the embodiment of the present invention, the dryer comprises a casing (2) in the form of a rectangular prism, with a truncated top and rounded short edges, which covers the intermediate member (4) and the receptacle (3) attached thereon as well as the sealing member (5) and which has at least one second opening (9) at the top thereof. The dryer further comprises a window (11) on the casing (2) that allows the indicator (10) on the wall of the receptacle (3) to be viewed. When the casing (2) is fixed onto the receptacle (3) and the intermediate member (4), the window (11) and the indicator (10) overlap. The edges of the top of the casing (2) are inclined downward and the edges form the edge of the second opening (9). Thus, a groove the base of which is the second opening (9) is formed at the top of the casing (2). Consequently, the second opening (9) on the casing (2) is located at a level below the apex of the casing (2). In this way, the filling of water in the receptacle (3) is facilitated and the laundry sticking onto the baffle (1) during the movement of the drum is prevented from closing the second opening (9). By means of said structure of the baffle (1), the instantaneous discharge of water from the baffle (1) is prevented, and the water in the receptacle (3) is allowed to slowly and homogeneously penetrate the laundry and turn into steam with hot air. The casing (2) holds the intermediate member (4), the receptacle (3) and the sealing member (5) together (Figure 1).

[0026] In an embodiment of the present invention, the casing (2) is fixed on the intermediate member (4) and the receptacle (3) by means of locking members (7). In this embodiment, the casing (2) is locked to the intermediate member (4) from the side walls thereof and is locked to the receptacle (3) from the top.

[0027] In an embodiment of the present invention, the first opening (8) and the second opening (9) overlap. In this embodiment, the first opening (8) is wider than the second opening (9). The water passing through the first opening (8) is directed to the second opening (9) by means of the sealing member (5) and transferred into the drum.

[0028] In an embodiment of the present invention, the dryer comprises fixing members (6) which enable the baffle (1) to be fixed to the drum. In a version of this embodiment of the present invention, screws are used as fixing members (6). In another version of this embodiment of the present invention, claws are used as fixing members (6). In this embodiment, the baffle (1) can be easily attached to and detached from the drum by the user.

[0029] The water filled into the baffle (1) by the user is enabled to slowly penetrate the laundry with the movement of the drum. Thus, the water transferred to the laundry via the baffle (1) evaporates due to the hot air in the drum. The evaporating water ensures that the wrinkles on the clothes are removed. Moreover, with the effect of water and steam, bad odors on unwashed laundry are removed.

[0030] By means of the present invention, the water delivery into the drum is performed in a simple and efficient manner. Thanks to the new baffle (1) design, with the rotation of the drum, it becomes possible to generate steam by sprinkling water on the laundry in a controlled manner, thus eliminating the odor of the laundry and minimizing wrinkles. By means of the baffle (1) of the present invention, the water is enabled to more homogeneously penetrate the laundry. In addition, the worn clothes which have odors thereon are dried in a short time without the need to wash. Moreover, by means of the present invention, the laundry is refreshed, the wrinkles are removed and ironing can be performed with less effort.

Claims

1. A dryer **comprising** a drum and a baffle (1) which is attached onto the drum, **characterized by** an intermediate member (4) which enables the baffle (1) to be fixed onto the drum; a receptacle (3) which is attached onto the intermediate member (4), which is filled with water and which has a first opening (8) thereon; and a casing (2) which is fixed onto the receptacle (3), which has at least one second opening (9) overlapping with the first opening (8), and which covers the intermediate member (4) and the receptacle (3).

2. A dryer as in Claim 1, **characterized by** the intermediate member (4) which is in the form of a rectangular prism with a truncated top and rounded short edges.

3. A dryer as in Claim 1 or 2, **characterized by** the intermediate member (4) which has at least one quadrilateral recess (12).

4. A dryer as in any one of the above claims, **characterized by** at least one first opening (8) at the top of the receptacle (3) which enables water to be filled therein.

5. A dryer as in Claim 4, **characterized by** the first opening (8) which is in the form of a slit extending almost all along the receptacle (3).

6. A dryer as in Claim 3, **characterized by** quadrilateral protrusions (13) on the base of the receptacle (3), which are arranged on the intermediate member (4) and which align with the recesses (12) and enter the recesses (12) when the intermediate member (4) is placed thereon.

7. A dryer as in any one of the above claims, **characterized by** an indicator (10) on the side wall of the receptacle (3), which enables the monitoring of the level of the water filled into the receptacle (3).

8. A dryer as in any one of the above claims, **characterized by** a barrier (14) in the form of a quadrilateral frame, on the receptacle (3), surrounding the first opening (8).

9. A dryer as in Claim 8, **characterized by** a sealing member (5) between the receptacle (3) and the casing (2), bearing against the inner walls of the barrier (14) facing the first opening (8) so as to surround the first opening (8) on the receptacle (3).

10. A dryer as in Claim 9, **characterized by** a casing (2) in the form of a rectangular prism, with a truncated top and rounded short edges, which covers the intermediate member (4) and the receptacle (3) attached thereon as well as the sealing member (5) and which has at least one second opening (9) at the top thereof.

11. A dryer as in any one of Claim 7 to Claim 10, **characterized by** a window (11) on the casing (2) that allows the indicator (10) on the wall of the receptacle (3) to be viewed.

12. A dryer as in any one of Claim 2 to Claim 11, **characterized by** the casing wherein the edges of the top thereof are inclined downward and form the edge of the second opening (9).

13. A dryer as in any one of Claim 2 to Claim 12, **characterized by** the second opening (9) which is located at a level below the apex of the casing (2).

14. A dryer as in any one of the above claims, **characterized by** the casing (2) which is fixed on the intermediate member (4) and the receptacle (3) by means of locking members (7).

Figure 1

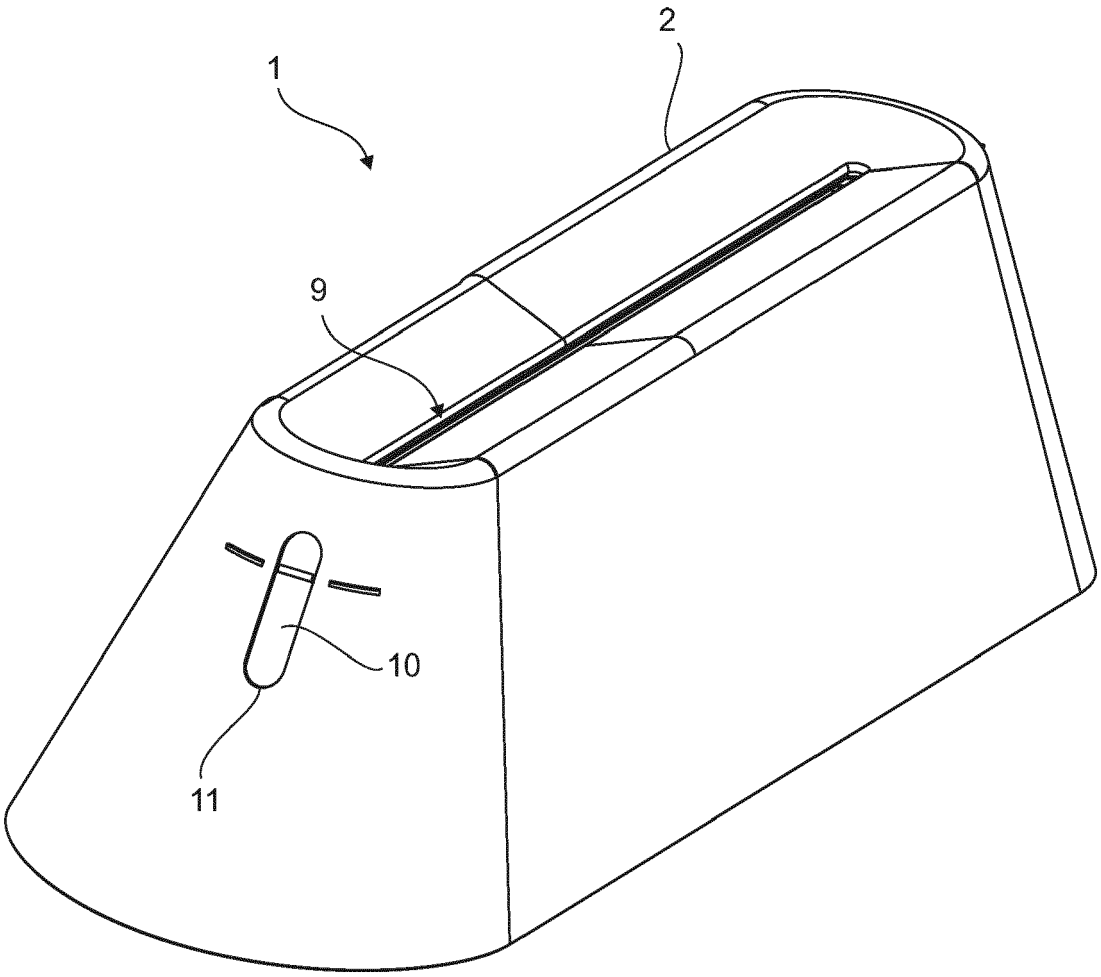


Figure 2

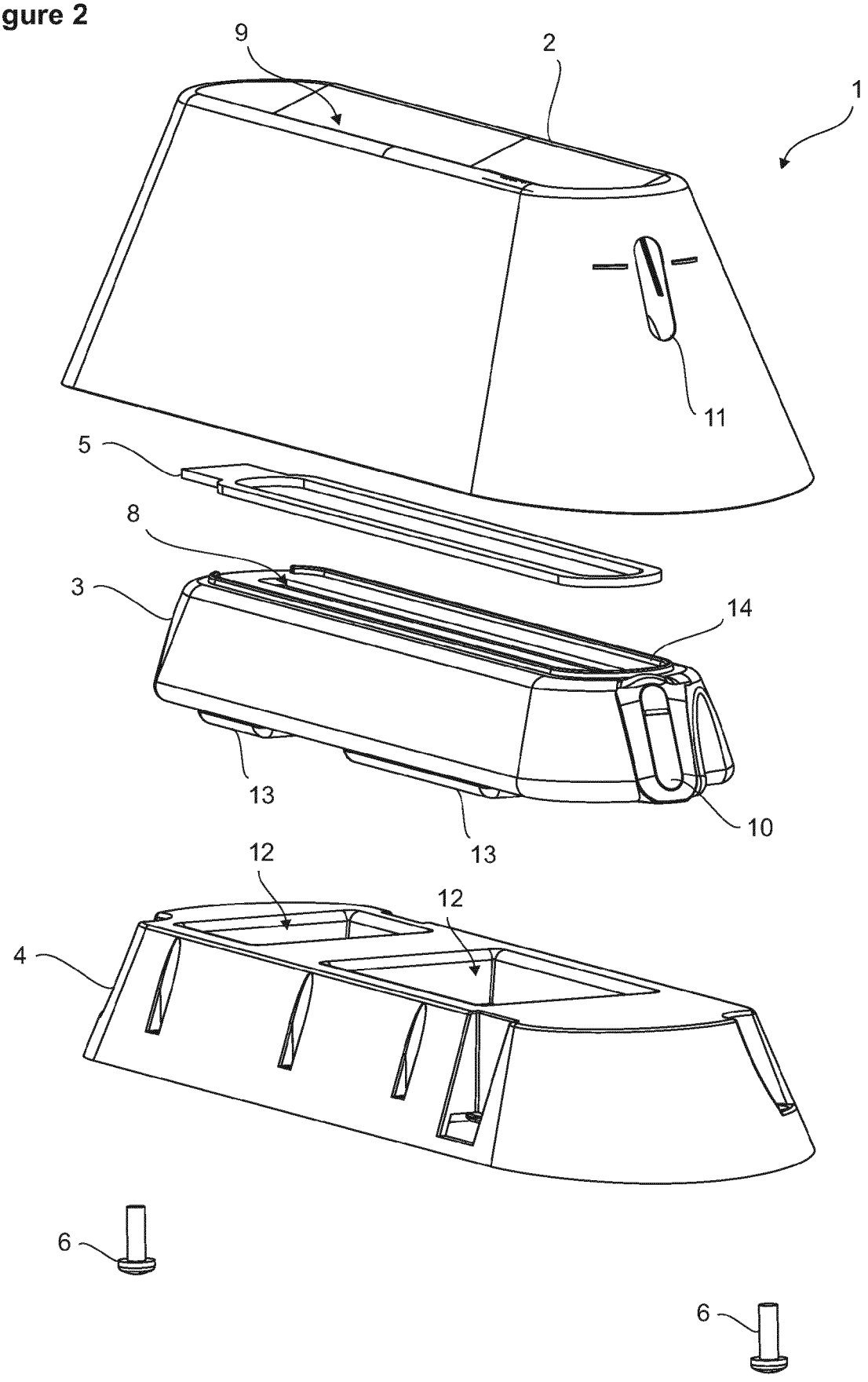
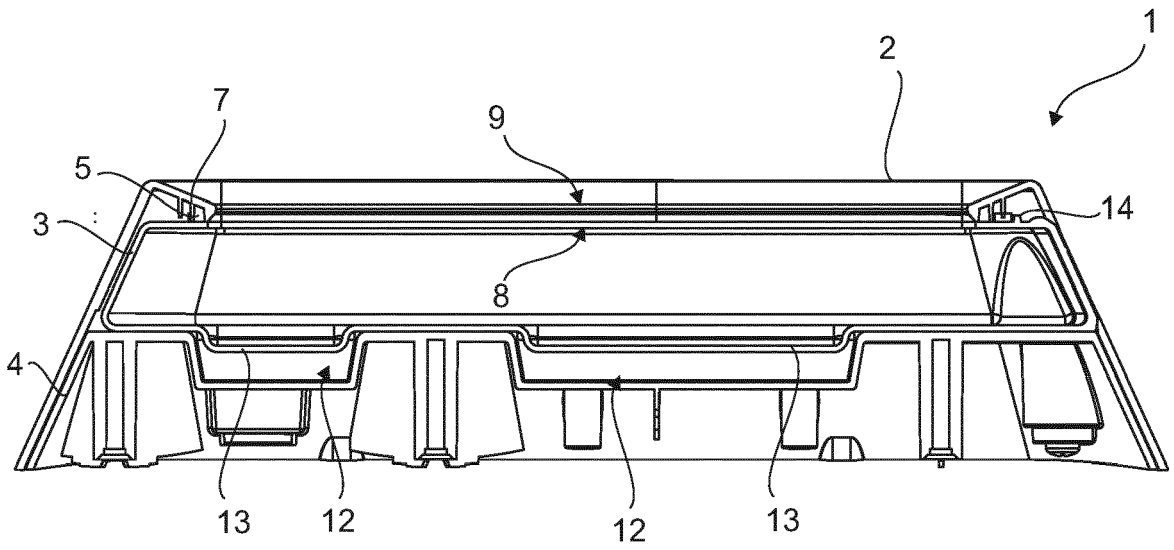


Figure 3



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EUROPEAN SEARCH REPORT

Application Number
EP 22 20 4769

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A	* column 1 - column 3; claims; figures *	2,3,5-14	D06F58/20
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D06F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	11 May 2023	Popara, Velimir

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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