

Appeal decision

Appeal No. 2018-10473

Appellant	JSP
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The case of appeal against the examiner's decision of refusal of Japanese Patent Application No. 2014-81579, entitled "Duct", [the application published on Dec. 25, 2014, Japanese Unexamined Patent Application Publication No. 2014-240743, number of claims (7)] has resulted in the following appeal decision:

Conclusion

The examiner's decision is revoked.

The invention of the present application shall be granted a patent.

Reason

No. 1 History of the procedures

The present application is an application filed on Apr. 11, 2014 (Priority Claim on May 14, 2013) for which reasons for refusal were notified as of Nov. 22, 2017, and, although a written opinion and a written amendment were submitted on Jan. 25, 2018, a decision of refusal (Examiner's decision) was made as of Apr. 20, 2018. Then, against this, an appeal against the examiner's decision of refusal was requested on Aug. 1, 2018 and, at the same time, a written amendment was submitted.

No. 2 Decision to dismiss amendment

[Conclusion of Decision to Dismiss Amendment]

The amendment made on Aug. 1, 2018 (hereinafter, referred to as "the Amendment") shall be dismissed.

[Reason]

1 Regarding the Amendment (Detail of Amendment)

The Amendment is one that includes, with respect to the scope of claims, an amendment to amend Claim 1 shown in the following (1), which is a claim before amended by the Amendment, to Claim 1 shown in the following (2). (The underlines indicate amended portions)

(1) Description of the Claims before the Amendment

Description of Claim 1 of the scope of claims amended by the amendment made on Jan. 25, 2018 before the Amendment is as follows.

"A duct comprising a foamed blow-molded article constituted of a polyolefin-based resin having a bending elastic modulus of 800 MPa or higher and 1,300 MPa or lower, the foamed blow-molded article having an average apparent density (D) of 0.1 g/cm³ or higher and 0.4 g/cm³ or lower, and a closed cell content of 60% or higher,

wherein the product (D×T²) of the average apparent density (D) and the square of an average thickness (T) [cm] of the foamed blow-molded article is 0.005 g/cm or higher and 0.04 g/cm or lower, and

wherein a value (D1/D2) indicating a ratio of an average apparent density (D1) in an inner surface side of the foamed blow-molded article to an average apparent density (D2) in an outer surface side of the foamed blow-molded article is 0.7 or more and 0.9 or less."

(2) Description of the Claims after the Amendment

By the Amendment, the description of Claim 1 of the scope of claims was amended as follows.

"A duct comprising a foamed blow-molded article constituted of a polyolefin-based resin having a bending elastic modulus of 800 MPa or higher and 1,300 MPa or lower, the foamed blow-molded article having an average apparent density (D) of 0.1 g/cm³ or higher and 0.4 g/cm³ or lower, and a closed cell content of 60% or higher (in this regard, however, excluding a hollow molded article in which foamed cells formed in an inner perimeter of the hollow molded article have been burst by performing a step of bursting the foamed cells formed in the inner perimeter of a parison),

wherein the product (D×T²) of the average apparent density (D) and the square of an average thickness (T) [cm] of the foamed blow-molded article is 0.005 g/cm or higher and 0.04 g/cm or lower, and

wherein a value (D1/D2) indicating a ratio of an average apparent density (D1) in an inner surface side of the foamed blow-molded article to an average apparent density (D2) in an outer surface side of the foamed blow-molded article is 0.7 or more and 0.9 or

less."

2 Judgment on suitability of the Amendment

The Amendment is one that adds, regarding "foamed blow-molded article" that is a matter necessary for specifying the invention described in Claim 1 before the Amendment, a limitation of "(in this regard, however, excluding a hollow molded article in which foamed cells formed in an inner perimeter of the hollow molded article have been burst by performing a step of bursting the foamed cells formed in the inner perimeter of a parison)". Since the fields of industrial application and the problems to be solved by the invention described in Claim 1 before amendment and the invention described in Claim 1 after amendment are identical, it falls under the category of ones for the purpose of restriction of the scope of Claims of Article 17-2(5)(ii) of the Patent Act.

Therefore, whether the invention described in Claim 1 after the Amendment (hereinafter, referred to as "the Amended Invention") complies with the provisions of Article 126(7) of the same Act as applied mutatis mutandis pursuant to the provisions of Article 17-2(6) of the same Act (whether Appellant can be granted a patent for that independently at the time of filing of the patent application) will be examined, hereinafter.

(1) The Amended Invention

The Amended Invention is one as has been described in the above-mentioned 1

(2).

(2) Judgment

In Claim 1, it is described as "a foamed blow-molded article ... (in this regard, however, excluding a hollow molded article in which foamed cells formed in an inner perimeter of the hollow molded article have been burst by performing a step of bursting the foamed cells formed in the inner perimeter of a parison)".

Regarding "a step of bursting the foamed cells formed in the inner perimeter of a parison", as described in the written request for appeal as of Aug. 1, 2018 that "In other words, taking the statements of the description of the present application into consideration, ones having a structure in which foamed cells have been burst in a positive manner by reducing the internal pressure of a parison are clearly excluded from a foamed blow-molded article that forms a duct of Invention 1. However, when a duct of Invention 1 is examined, even if the step of bursting foams in the inner peripheral surface is not performed in a positive manner, there is a possibility that a small proportion of foam cells end up bursting in the process of foaming or the process of blow molding (this is

called passive foam bursting).", even if the step of bursting foamed cells is not performed in a positive manner by reducing the internal pressure of a parison, it is considered that a small proportion of foam cells may burst in the process of foaming or the process of blow molding.

However, in Claim 1, it is just described as "a step of bursting the foamed cells formed in the inner perimeter of a parison", and therefore it is unclear what kinds of steps are included in "a step of bursting a foamed cell"; for example, whether or not there is included not only a step of bursting foamed cells in a positive manner such as reducing the internal pressure of a parison, but also another step that is a step of bursting a small proportion of foamed cells.

In addition, the statement in Claim 1 of "a foamed blow-molded article ... (in this regard, however, excluding a hollow molded article in which foamed cells formed in an inner perimeter of the hollow molded article have been burst by performing a step of bursting the foamed cells formed in the inner perimeter of a parison)" is a statement including a manufacturing method of a product. Here, in a case where a manufacturing method of a product is described in a claim concerning an invention of the product, it is reasonable to understand that a case where it can be said that the statement of the claim in question conforms to the requirements of "clarity requirements" stipulated in Article 36(6)(ii) of the Patent Act is only when there exist circumstances such that it is impossible to directly specify the product by its structures or characteristics, or directly specifying the product by its structures or characteristics is impractical ("impossible/impractical circumstances") at the time of filing of the application (Judgment of the Second Petty Bench of the Supreme Court of Jun. 5, 2015: (Ju) No. 1204, 2012, (Ju) No. 2658, 2012). However, there are no statements in the description, etc. regarding existence of impossible/impractical circumstances, and, in addition, there is no such allegation or proof from Appellant. Therefore, a reason to recognize such existence cannot be found.

From the above, the Amended Invention is not clear.

Accordingly, the statement of the scope of claims of this application does not meet the requirement stipulated in Article 36(6)(ii) of the Patent Act, and thus Appellant should not be granted a patent for the Amended Invention independently at the time of filing the patent application.

3 Closing on the Amendment

Therefore, since the Amendment violates the provisions of Article 126(7) of the Patent Act as applied mutatis mutandis pursuant to the provisions of Article 17-2(6) of the same Act, it should be dismissed under the provisions of Article 53(1) of the same Act

which is applied mutatis mutandis by replacing certain terms pursuant to the provisions of Article 159(1) of the same Act.

Accordingly, in conclusion, the above-mentioned decision to dismiss the amendment has been made.

No. 3 Outline of the examiner's decision

Outline of the examiner's decision (the decision of refusal as of Apr. 20, 2018) is as follows.

Since the inventions according to Claims 1 to 7 of the present application are ones that could have been invented with ease by a person ordinarily skilled in the art of the inventions (hereinafter, referred to as "a person skilled in the art") based on the inventions described in the following Cited Documents 1 to 5, Appellant should not be granted a patent for these in accordance with the provisions of Article 29(2) of the Patent Act.

List of Cited Documents, etc.

1. Japanese Unexamined Patent Application Publication No. S63-309434
2. Japanese Unexamined Patent Application Publication No. 2011-194700
3. Japanese Unexamined Patent Application Publication No. 2004-116959
4. Japanese Unexamined Patent Application Publication No. 2012-30498
5. Japanese Unexamined Patent Application Publication No. 2011-116120

No. 4 The Invention

Since the Amendment has been dismissed as described in the above-mentioned "No. 2 Decision to dismiss the amendment", it is recognized that the inventions according to Claims 1 to 7 of the present application (hereinafter, referred to as "Invention 1" to "Invention 7") are, as viewed from the statements of the description and the scope of claims amended by the written amendment submitted on Jan. 25, 2018, and the drawings at the initial application, ones as shown in Claims 1 to 7 of the scope of claims in question, and Invention 1 is as follows.

"[Claim 1] A duct comprising a foamed blow-molded article constituted of a polyolefin-based resin having a bending elastic modulus of 800 MPa or higher and 1,300 MPa or lower, the foamed blow-molded article having an average apparent density (D) of 0.1 g/cm³ or higher and 0.4 g/cm³ or lower, and a closed cell content of 60% or higher,

wherein the product ($D \times T^2$) of the average apparent density (D) and the square of an average thickness (T) [cm] of the foamed blow-molded article is 0.005 g/cm or higher and 0.04 g/cm or lower, and

wherein a value ($D1/D2$) indicating a ratio of an average apparent density (D1) in an inner surface side of the foamed blow-molded article to an average apparent density (D2) in an outer surface side of the foamed blow-molded article is 0.7 or more and 0.9 or less."

Inventions 2 to 7 are inventions made by restricting Invention 1.

No. 5 Cited Documents, Cited Invention, and the like

1 Regarding Cited Document 1

In the above-mentioned Cited Document 1 cited in the reasons for refusal stated in the examiner's decision and distributed before the priority date for the present application, there are described the following matters together with drawings. (Underlines have been given by the body for the purpose of facilitating understanding)

(1) Description in Cited Document 1

1a) "The present invention relates to a hollow molding product having burst foamed cells in at least a part of an inner peripheral surface and to a manufacturing method and device thereof, and, more particularly, to a hollow molding product preferred to be used as an air intake duct having a sound absorbing effect, and to a manufacturing method and device thereof." (Page 2, lower right column, lines 10 to 15)

1b) "FIG. 1 indicates a manufacturing device that is constituted based on one example of the present invention, and manufactures, by a blow molding method, a hollow molding product having burst foamed cells at least partially in at least a part of an inner perimeter. As has been illustrated, a screw 1 to be communicated with a hopper (not shown) to store material for molding of a hollow molding product of the present invention is provided, and, by the screw 1 being driven to rotate in a predetermined direction, the material is supplied into a nozzle or a supply route 3 that is defined within a die head 2. Although, as a material of this case, there may be used any material that can be used for molding a desired hollow molding product, it may be, for example, thermoplastic resin such as polyethylene or polystyrene, other plastic materials or elastomers, and any other desired materials. Furthermore, in the illustrated example, an appropriate quantity of a foamed agent is mixed within this material." (Page 4, lower left column, lines 3 to 19)

1c) "In this way, when the pressure of the interior portion 8 of the parison 9 is reduced, a foamed agent on the inner peripheral surface of the parison 9 expands to form foamed cells 14, and, further, these foamed cells 14 are overexpanded and the foamed cells 14 are burst. As a result, a large number of small cavity parts will be formed on the inner peripheral surface of the parison 9 by burst foamed cells. Note that, in this case, although it is not necessary that all of the foamed cells formed on the inner peripheral surface of the parison 9 are burst, it is desirable that as many foamed cells as possible are burst to thereby form many cavity parts to that extent. A partial cross-sectional view of a hollow molding product that is formed in this way is shown in FIG. 3. That is, as shown in FIG. 3, burst foamed cells 17 are arranged on and along the inner peripheral surface of the parison 9 that has been molded, and, along the outer peripheral surface of the parison 9, a skin layer 16 is formed. In this connection, although it is desirable that the skin layer 16 does not include a foamed cell, even if a foamed cell is contained, it is desirable that the degree of foaming thereof is low and extremely small." (Page 6, lower right column, lines 1 to 19)

(2) Cited Invention

From the above-mentioned 1(1), in Cited Document 1, there is described the following invention (hereinafter, referred to as "Cited Invention").

"An air intake duct comprising a hollow molding product, formed of polyethylene, having foamed cells 14, and manufactured by a blow molding method, wherein numerous small cavity parts are formed on the inner peripheral surface of the parison 9 by burst foamed cells, and, in addition, the skin layer 16 is formed on the outer peripheral surface of the parison 9, and wherein the skin layer 16 does not contain the foamed cells 14, or even if the foamed cells 14 are contained, the degree of foaming of the foamed cells 14 is low."

2 Regarding Cited Documents 2 to 5

(1) Cited Document 2

In the above-mentioned Cited Document 2 that was cited in the reasons for refusal stated in the examiner's decision and was distributed before the priority date for the present application, there is described, relating to "Duct for vehicle", a technical matter (hereinafter, referred to as "Technical Matter described in Cited Document 2), as viewed from the statements of paragraphs [0015] to [0021] thereof, of "a duct made of mixed resin of high-density polyethylene having a bending elastic modulus of 700 MPa

or more, and high-density polyethylene having a bending elastic modulus of 1,000 MPa or more".

(2) Cited Document 3

In the above-mentioned Cited Document 3 that was cited in the reasons for refusal stated in the examiner's decision and was distributed before the priority date for the present application, there is described, relating to "duct", a technical matter (hereinafter, referred to as "Technical Matter described in Cited Document 3"), as viewed from the statements of Example 2 (paragraphs [0074] to [0084]) thereof, of "a duct comprising a hollow foamed molded body having an apparent density of the hollow foamed molded body of 0.13 g/cm³, having a closed cell content of 80%, and having a thickness of the hollow foamed molded body of 0.55 cm".

(3) Cited Document 4

In the above-mentioned Cited Document 4 that was cited in the reasons for refusal stated in the examiner's decision and was distributed before the priority date for the present application, there is described, relating to "foamed molded body", a technical matter (hereinafter, referred to as "Technical Matter described in Cited Document 4"), as viewed from the statements of paragraphs [0011] to [0026] thereof, as "a foamed molded body made by molding a mixed resin in a foaming manner, the mixed resin containing 50-90 wt% polyethylene system resin including high-density polyethylene of a long-chain branch structure and 10-50 wt% of polypropylene of a long-chain branch structure, wherein, given that a blending ratio of the high-density polyethylene of the long-chain branch structure is X (wt%), and a blending ratio of the polypropylene of the long-chain branch structure is Y (wt%), it is such that $X + 2Y \geq 60$, and, in addition, a thermoplastic elastomer of 5-40 wt% is mixed thereto".

(4) Cited Document 5

In the above-mentioned Cited Document 5 that was cited in the reasons for refusal stated in the examiner's decision and was distributed before the priority date for the present application, it is recognized that there is described, relating to "foamed molded body", a technical matter (hereinafter, referred to as "Technical Matter described in Cited Document 5"), as viewed from the statements of paragraph [0018] and FIG. 2 thereof, as "a foamed molded body which has a flat part, a distance between opposing partings (L1, L2) is 10 cm, and a blow ratio is 0.2".

No. 6 Comparison / judgment

1 Regarding Invention 1

(1) Comparison

When Invention 1 and Cited Invention are compared, "polyethylene" and "a hollow molding product, having foamed cells 14, and manufactured by a blow molding method" in Cited Invention correspond to, as viewed from their functions, constitutions, and technical significance, "polyolefin system resin" and "foamed blow-molded article" in Invention 1, respectively.

Accordingly, it can be said that there exist the following corresponding feature and different features between Invention 1 and Cited Invention.

[Corresponding Feature]

"A duct comprising a foamed blow-molded article constituted of a polyolefin-based resin."

[Different Feature 1]

A point that, regarding a foamed blow-molded article, it is "constituted of a polyolefin-based resin having a bending elastic modulus of 800 MPa or higher and 1,300 MPa or lower, the foamed blow-molded article having an average apparent density (D) of 0.1 g/cm³ or higher and 0.4 g/cm³ or lower, and a closed cell content of 60% or higher" in Invention 1, whereas, in Cited Invention, such constitution is not specified.

[Different Feature 2]

A point that, it is such that, in Invention 1, "the product (D×T²) of the average apparent density (D) and the square of an average thickness (T) [cm] of the foamed blow-molded article is 0.005 g/cm or higher and 0.04 g/cm or lower", whereas, in Cited Invention, such constitution is not specified.

[Different Feature 3]

A point that, it is such that, in Invention 1, "a value (D1/D2) indicating a ratio of an average apparent density (D1) in an inner surface side of the foamed blow-molded article to an average apparent density (D2) in an outer surface side of the foamed blow-molded article is 0.7 or more and 0.9 or less", whereas, in Cited Invention, although it is such that "numerous small cavity parts are formed on the inner peripheral surface of the parison 9 by burst foamed cells, and, in addition, the skin layer 16 is formed on the outer

peripheral surface of the parison 9, and wherein the skin layer 16 does not contain the foamed cells 14, or even if the foamed cells 14 are contained, the degree of foaming of the foamed cells 14 is low.", it is not specified that the above-mentioned D1/D2 is made to be 0.7 or more and 0.9 or less.

Hereinafter, in the light of the case, Different Features 1 and 3 will be now discussed below.

[Regarding Different Features 1 and 3]

In Cited Invention, the skin layer 16 formed on the outer peripheral surface of the parison 9 does not contain the foamed cells 14, or, even when the foamed cells 14 are contained, the degree of foaming of the foamed cells 14 is low, and, on the other hand, the foamed cells 14 are formed on the inner peripheral surface of the parison 9, and, therefore, it is supposed that the average apparent density of the inner peripheral surface of the parison 9 is lower than the average apparent density of the outer peripheral surface of the parison 9. However, its degree is unclear, and thus, it cannot be said that Cited Invention is one that substantially includes the constitution of "a value (D1/D2) indicating a ratio of an average apparent density (D1) in an inner surface side of the foamed blow-molded article to an average apparent density (D2) in an outer surface side of the foamed blow-molded article is 0.7 or more and 0.9 or less" of Invention 1, or suggests such constitution.

In addition, since Cited Invention is one that makes foamed cells on the inner peripheral surface of the parison 9 burst, and it is presumed that, by this, a closed cell content is lowered, and, thus, it has a technical idea different from the one of "a closed cell content of 60% or higher" of Invention 1.

Therefore, it cannot be said that, in Cited Invention, for a duct comprising a foamed blow-molded article of "a closed cell content of 60% or higher" as Invention 1, to make "a value (D1/D2) indicating a ratio of an average apparent density (D1) in an inner surface side of the foamed blow-molded article to an average apparent density (D2) in an outer surface side of the foamed blow-molded article is 0.7 or more and 0.9 or less" is a design-related matter that can be arbitrarily determined by a person skilled in the art.

In addition, for a duct comprising a foamed blow-molded article of "a closed cell content of 60% or higher" of Invention 1, to make "a value (D1/D2) indicating a ratio of an average apparent density (D1) in an inner surface side of the foamed blow-molded article to an average apparent density (D2) in an outer surface side of the foamed blow-molded article is 0.7 or more and 0.9 or less" is also not described in the technical matters

described in the above-mentioned Cited Documents 2 to 5, and thus it cannot be said that it was a matter of well-known art before the priority date of the present application.

Accordingly, since it cannot be said that, in Cited Invention, it could have easily been derived by a person skilled in the art to adopt the constitution of Invention 1 concerning Different Features 1 and 3, without examining the other Different Feature, it cannot be said that Invention 1 would have been invented by a person skilled in the art with ease based on Cited Invention and the technical matters described in Cited Documents 2 to 5.

2 Regarding Inventions 2 to 7

Claims 2 to 7 in the scope of claims of the present application are ones that are described directly or indirectly citing the description of Claim 1 without replacing it with other descriptions, and, therefore, Inventions 2 to 7 are ones that include all the matters specifying the invention of Invention 1. Therefore, due to a reason similar to that of Invention 1, it cannot be said that Inventions 2 to 7 would have been invented with ease by a person skilled in the art based on Cited Invention and the technical matters described in Cited Documents 2 to 5.

No. 7 Closing

As above, Inventions 1 to 7 are not ones that could have been invented with ease by a person skilled in the art based on Cited Invention and the technical matters described in Cited Documents 2 to 5.

Accordingly, the present application cannot be rejected by the reasons for refusal stated in the examiner's decision.

In addition, beyond that, no reasons for refusal were found.

Therefore, the appeal decision shall be made as described in the conclusion.

May 8, 2019

Chief administrative judge: MATSUSHITA, Akira
Administrative judge: OYA, Shizuo
Administrative judge: KIMOTO, Takashi