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(54) REFRIGERATOR PACKAGING STRUCTURE AND PACKAGING METHOD

(57) The present invention provides a packaging structure and a packaging method for a refrigerator. The packaging structure for a refrigerator comprises a bottom seat supported on a bottom of the refrigerator, a top seat covering a top of the refrigerator, four vertical side edges, and a film layer, wherein the film layer wraps an outer surface of an outline main body formed by the bottom seat, the top seat and the four vertical side edges by means of film shrinking upon heating. The packaging structure and packaging method employ the film which is heated to shrink to form a layer of outer film, the packaging manner of covering the whole refrigerator with paper needn't be employed, and the cost can be saved.

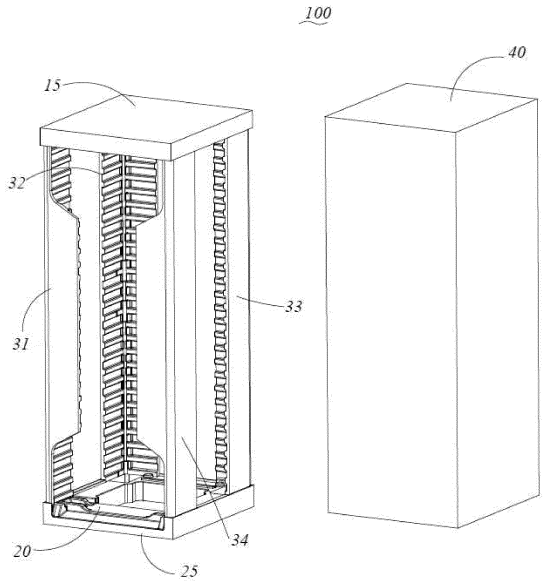

FIG.1

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Description

TECHNICAL FIELD

[0001] The present invention relates to the technical field of refrigerator packaging, and specifically to a packaging structure and a packaging method for refrigerators.

BACKGROUND

[0002] As economy develops rapidly and people's income increases, household electrical appliances such as refrigerators have already become indispensable home appliances. In the current industry chain of refrigerators, refrigerator packaging is an indispensable section for sales, transportation and storage.

[0003] At present, refrigerators in the prior art all employ a paper packaging box. The packaging box comprises a base, an upper cover, protective corrugated paper or foam on sides. The paper packaging box is large-sized, costly and not environment-friendly, as well as prone to damp, mold and fall-apart problems due to the influence of the environment.

[0004] Therefore, in view of technical problems existing in the paper packaging boxes in the prior art, it is urgently desirable to provide a packaging structure for refrigerators, which is low-cost, small-sized, environment friendly and not prone to the influence from the environment, and a packaging method for refrigerators.

SUMMARY

[0005] In view of technical problems that paper packaging boxes in the prior art are large-sized, costly and not environment-friendly as well as prone to damp, mold and fall-apart problems due to the influence of the environment, embodiments of the present invention a packaging structure for a refrigerator, which is small-sized, low-cost, and less environment-affected, and a packaging method. The packaging structure for a refrigerator employs a film which is heated to shrink to form a layer of outer film without employing the packaging manner of using paper to covering the whole refrigerator, thereby saving the cost, reducing the size and avoiding the influence from environmental factors.

[0006] A specific solution of the packaging structure for a refrigerator according to embodiments of the present invention is as follows: a packaging structure for a refrigerator comprises a bottom seat supported on a bottom of the refrigerator; a top seat covering a top of the refrigerator; four vertical side edges, both ends of each vertical side edge being respectively connected with the bottom seat and the top seat, and the four vertical side edges being respectively disposed at four corners of the bottom seat and the top seat; the bottom seat, the top seat and the four vertical side edges form an accommodation space for accommodating the refrigerator; wherein the packaging structure further comprises a film layer which wraps an outer surface of an outline main body formed by the bottom seat, the top seat and the four vertical side edges by means of film shrinking upon heating.

[0007] Preferably, the packaging structure further comprises an upper cover plate which covers the outside of the top seat, and the film layer wraps an outer surface of an outline main body formed by the upper cover plate, the bottom seat and the four vertical side edges.

[0008] Preferably, the packaging structure further comprises a lower cover plate which covers the outside of the bottom seat, and the film layer wraps an outer surface of an outline main body formed by the upper cover plate, the lower cover plate and the four vertical side edges.

[0009] Preferably, the bottom seat, the top seat and the four vertical side edges are all made of a shock-absorbing material.

[0010] Preferably, a hollow is provided in the middle of the bottom seat, an area of the hollow is between one third and two thirds of the area of the bottom seat, a plurality of through holes are disposed at predetermined positions of the top seat, and the plurality of through holes are evenly arranged.

[0011] Preferably, the packaging structure further comprises a strapping band which is wound around the outside of the film layer.

[0012] Preferably, the material of the film layer comprises polyethylene or polyvinyl chloride.

[0013] Preferably, a plurality of spaced-apart protrusions are disposed on inner surfaces of the vertical side edges facing towards the refrigerator, and are configured to abut against the outer surface of the refrigerator.

[0014] Embodiments of the present invention further provide a packaging method for packaging a refrigerator, comprising the following steps: placing the refrigerator on a bottom seat; fixing four vertical side edges at four corners of the bottom seat respectively; placing a top seat on the top of the refrigerator and fixing the top seat with the four vertical side edges; covering an outer surface of an outline main body formed by the bottom seat, the top seat and the four vertical side edges with a film, and heating the film so that the film shrinks to form a film layer.

[0015] Preferably, the packaging method further comprises: winding a strapping band around the outside of the film layer.

[0016] As can be seen from the above technical solutions, embodiments of the present invention have the following advantages:

[0017] The packaging structure for a refrigerator proposed by embodiments of the present invention comprises the top seat, the bottom seat and the four vertical side edges, and employs the film which is heated to shrink to form a layer of outer film, the outer film tightly wraps the top seat, the bottom seat and the four vertical side edges due to shrinking upon heating, into a whole which is not apt to fall apart, so that the packaging manner of covering

the whole refrigerator with paper needn't be employed, the cost can be saved and the size can be reduced. Furthermore, the film layer in the packaging structure for the refrigerator proposed by the embodiments of the present invention is made of a transparent material so that the user can view the status of the product of the refrigerator without opening the packaging box. Furthermore, the film layer of the packaging structure for the refrigerator proposed by the embodiments of the present invention has good chemical stability and water resistance, thereby effectively avoiding problems such as damp, mold and fall-apart problems of the packaging structure due to environmental factors.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018]

FIG. 1 is a perspective view of a packaging structure for a refrigerator according to an embodiment of the present invention;

FIG. 2 is an exploded perspective view of the packaging structure (not including a film layer) in the embodiment shown in FIG. 2;

FIG. 3 is a perspective view of a vertical side edge in the embodiment shown in FIG. 1;

FIG. 4 is a flow chart of a packaging method for a refrigerator according to an embodiment of the present invention.

DETAILED DESCRIPTION

[0019] Technical solutions in embodiments of the present invention will be described clearly and completely hereunder with reference to figures in the embodiments of the present invention to enable those skilled in the art to better understand the solutions of the present invention. Obviously, the described embodiments are only partial embodiments of the present invention other than all embodiments. All other embodiments obtained by those having ordinary skill in the art based on the embodiments in the present invention without making any inventive efforts should all fall within the protection scope of the present invention.

[0020] Terms such as "first", "second", "third" and "fourth" (if any) in the description, claims and the above figures of the present invention are used to distinguish similar objects and not necessarily used to describe a specific order or a sequential order. It should be appreciated that the thus-used data may be interchangeable in proper cases so that the embodiments described here can be implemented in an order other than the content shown or depicted here. In addition, terms "comprise" and "have" and their variants are intended to cover inclusion in a non-exclusive way, for example, a process, method, system, product or apparatus including a series of steps or units is not necessarily limited to clearly listing which steps or units, and instead, may comprise other steps or units which are not clearly listed out or are intrinsic for the process, method, system, product or apparatus.

[0021] FIG. 1 to FIG. 2 show perspective views of a packaging structure for a refrigerator according to embodiments of the present invention. As shown in FIG. 1, since a film layer is transparent in the embodiment, the film layer is separately shown in parallel as a structural form in a final state. In the embodiment, an upstanding direction of the refrigerator when the refrigerator is located in a packaging structure 100 is taken as a vertical direction, a surface in a direction close to the refrigerator is taken an inner surface, and a surface in a direction away from the refrigerator is taken as an outer surface.

[0022] In one embodiment, a packaging structure 100 for a refrigerator comprises a bottom seat 20 supported on the bottom of the refrigerator, a top seat 10 covering the top of the refrigerator, four vertical side edges and a film layer 40. Both ends of each vertical side edge are respectively connected with the bottom seat 20 and the top seat 10, and the four vertical side edges are respectively disposed at four corners of the bottom seat 20 and the top seat 10. The top seat 10, the bottom seat 20 and the four vertical side edges form an accommodation space for accommodating the refrigerator. In this embodiment, the film layer 40 wraps an outer surface of an outline main body formed by the bottom seat 20, the top seat 10 and the four vertical side edges by means of film shrinking upon heating. The bottom seat 20, the top seat 10, the four vertical side edges and the film layer 40 form a complete packaging structure 100.

[0023] A shape of the top seat 10 is substantially the same as the shape of the top of the refrigerator; a shape of the bottom seat 20 is substantially the same as the shape of the bottom of the refrigerator. Preferably, the top seat 10 and the bottom seat 20 have the same shape and size. In the present embodiment, the shapes of the top seat 10 and the bottom seat 20 are both a regular quadrilateral such as a square or a rectangle. The top seat 10 and the bottom seat 20 respectively have four corners.

[0024] A structural configuration of the bottom seat 20 matches the structural configuration of the bottom of the refrigerator, to enhance the fixing effect of the refrigerator. Specifically, if the structural configuration of the bottom of the refrigerator is a structural configuration with four rollers protruding from a plane, the structural configuration of the bottom seat 20 is a structural configuration with four roller cavities recessed into a plane. The four roller cavities are adapted to the rollers in size and position. Certainly, there are various structural configurations of the bottom of the refrigerator, and correspondingly, the structural configuration of the bottom seat 20 varies accordingly. With the structural configuration matching the structural configuration of the bottom seat of the refrigerator, the bottom seat 20 enhances the effect of the packaging structure 100 in fixing the refrigerator. Further referring to FIG. 2, in the present embodiment, a hollow

201 is provided in the middle of the bottom seat 20. The area of the hollow 201 is between one third and two thirds of the area of the bottom seat 20. The hollow structure of the bottom seat 20 can further reduce the cost of the material without affecting the stability of the bottom seat 20.

[0025] A plurality of through holes 101 are disposed at predetermined positions of the top seat 10, and the plurality of through holes 101 are evenly arranged. For the sake of clarity and conciseness of the figures, only through holes 101 are exemplarily marked in FIG. 2, and not all the through holes 101 are marked.

[0026] In the present embodiment, the bottom seat 20, the top seat 10, and the four vertical side edges are all made of a shock-absorbing material such as a polyethylene foam (EPE), a foamed polypropylene (EPP), a rubber material, fleece paper etc. By employing the shock-absorbing material, the shock-resistant capability of the packaging structure 100 is effectively improved, thereby avoiding damage to the refrigerator due to shock during transportation.

[0027] The film layer 40 wraps the outside of the bottom seat 20, the top seat 10 and the four vertical side edges by means of film shrinking upon heating. After the refrigerator is accommodated in the accommodating space and the bottom seat 20, the top seat 10 and the four vertical side edges are assembled together, a worker or an industrial robot covers, in the vertical direction, the outer surface of the outline main body constituted by the bottom seat 20, the top seat 10 and the four vertical side edges, the film is made shrink upon heating, so that a transparent film layer 40 is formed on the surface of the outer contour formed by the bottom seat 20, the top seat 10 and the four vertical side edges. The film layer 40 surrounds and fixes the bottom seat 20, the top seat 10, the four vertical side edges and the refrigerator as a whole.

[0028] The material of the film layer 40 has colorless, odorless, non-toxic, transparent and easily heat-shrinkable properties. In the present embodiment, the material specifically selected for the film layer 40 comprises polyethylene (PE film) or polyvinyl chloride (PVC film). A manner of heating the film may employ heating with a heat gun or systematic heating with a heating device. Heating with the heat gun is generally suitable for small-scale production, and heating with the heating device is generally suitable for mass production. The film layer 40 has transparent properties, and the user can see the status of a refrigerator product without opening the package. Furthermore, the film layer 40 has characteristics such as low cost, small size and compactness, which effectively reduces the cost during production and transportation. Furthermore, the film layer 40 has characteristics such as stable chemical properties and water resistance, thereby effectively avoiding damp, mold and falling-apart problems of the packaging structure due to environmental factors.

[0029] In a preferred embodiment, the packaging structure 100 further comprises an upper cover plate 15. The upper cover plate 15 covers the outside of the top seat 10. The upper cover plate 15 may be in a shape of a semi-open box, the top seat 10 may be received and mounted in an inner cavity of the box, and a height of the box is equal to or slightly larger than the height of the top seat 10. The film layer 40 wraps an outer surface of an outline main body formed by the bottom seat 20, the upper cover plate 15 and the four vertical side edges by means of film shrinking upon heating. The bottom seat 20, the upper cover plate 15, the top seat 10, the four vertical side edges and the film layer 40 form a complete packaging structure 100. Preferably, the packaging structure 100 further comprises a lower cover plate 25. The lower cover 25 covers the outside of the bottom seat 20. The lower cover plate 25 may be in a shape of a semi-open box, the bottom seat 20 may be received and mounted in an inner cavity of the box, and a height of the box is equal to or slightly larger than the height of the bottom seat 20. The film layer 40 wraps an outer surface of an outline main body formed by the lower cover plate 25, the upper cover plate 15 and the four vertical side edges by means of film shrinking upon heating. The lower cover plate 25, the bottom seat 20, the upper cover plate 15, the top seat 10, the four vertical side edges and the film layer 40 form a complete packaging structure 100.

[0030] In the embodiment shown in FIG. 1 to FIG. 2, the packaging structure 100 comprises the upper cover plate 15, a top seat 10, four vertical side edges, the bottom seat 20, the lower cover plate 25 and the film layer 40. As stated above, the upper cover plate 15 and the lower cover plate 25 in the packaging structure 100 may not be provided, or only one or both of the upper cover plate 15 and the lower cover plate 25 may be provided.

[0031] Referring to FIG. 1 and FIG. 2, the four vertical side edges are respectively a first vertical side edge 31, a second vertical side edge 32, a third vertical side edge 31 and a fourth vertical side edge 34, and both ends of each of the vertical side edge are respectively connected with the bottom seat 20 and the top seat 10. The first vertical side edge 31, the second vertical side edge 32, the third vertical side edge 33 and the fourth vertical side edge 34 are respectively disposed at four corners of the bottom seat 20 and the top seat 10. The bottom seat 20, the top seat 10 and the four vertical side edges form an accommodation space for accommodating the refrigerator.

[0032] Further referring to FIG. 3, in the present embodiment, a specific structure of a vertical side edge is illustrated by taking the third vertical side edge 33 as an example. The third vertical side edge 33 comprises two sides, which are a first side 331 and a second side 332 respectively. The first side 331 and the second side 332 are respectively perpendicular to a vertical direction, and have a predetermined extension length (i.e., a transverse width) along the corners of the top seat 10 and the bottom seat 20. Preferably, a plurality of spaced-apart protrusions 330 are disposed on an inner surface of the third

vertical side edge 33 facing towards the refrigerator, i.e., a plurality of spaced-apart protrusions 33 are disposed on inner surfaces of the first side 331 and the second side 332 and configured to abut against the outer surface of the refrigerator. For the sake of clarity and conciseness of the figure, only two protrusions 330 are exemplarily marked in FIG. 3, and not all protrusions 330 are marked. In the present embodiment, the protrusions 330 are transversely elongated protrusions. In other embodiments, the protrusions 330 may also be in other shapes, for example, annular protrusions with a preset radius, or point-shaped spherical protrusions. The protrusions 330 further improve the shock-absorbing performance of the packaging structure 100.

[0033] Preferably, the shapes of the four vertical side edges may vary. As shown in FIG. 1 to FIG. 2, in the present embodiment, the first vertical side edge 31 and the fourth vertical side edge 34 have the same shape and each include a long side and a short side, i.e., the two sides have different lengths in the vertical direction; the second vertical side edges 32 and the third vertical side edges 33 have the same shape and each include two sides with the same length in the vertical direction.

[0034] In a preferred embodiment, the packaging structure 100 further comprises a strapping band (not shown). The strapping band is wound around the outside of the film layer. Specifically, the strapping band may be wound once around the outside of the outline main body of the packaging structure 100 in a vertical direction. The packaging structure 100 may comprise a plurality of spaced-apart strapping bands. The strapping bands can not only further strengthen the stability of the whole packaging structure, but also serve as gripping places for workers upon transportation, thereby facilitating the workers to transport the refrigerator.

[0035] As shown in FIG. 4, an embodiment of the present invention further provides a packaging method for packaging a refrigerator. In this embodiment, the packaging method comprises four steps, and the specific content of each step is presented as follows.

[0036] Step S1: placing the refrigerator on the bottom seat. As stated above, when the packaging structure further comprises a lower cover plate, the bottom seat may be placed in the lower cover plate first, and then the refrigerator be placed on the bottom seat.

[0037] Step S2: fixing the four vertical side edges at the four corners of the bottom seat respectively.

[0038] Step S3: placing the top seat on the top of the refrigerator and fixing the top seat with the four vertical side edges. As stated above, when the packaging structure further comprises an upper cover plate, after the top seat is placed on the top of the refrigerator and fixed with the four vertical side edges, the upper cover plate is disposed on the top seat. Alternatively, the top seat and the upper cover plate are firstly fixed into one piece, and then the one-piece structure is placed on the top of the refrigerator and fixed with the four vertical side edges.

[0039] Step S4: covering the outer surface of the outline main body formed by the bottom seat, the top seat and the four vertical side edges with a film, and heating the film so that the film shrinks to form a film layer. The film layer surrounds and fixes the bottom seat, the top seat, the four vertical side edges and the refrigerator as a whole. A manner of heating the film may employ heating with a heat gun or systematic heating with a heating device. Heating with the heat gun is generally suitable for small-scale production, and heating with the heating device is generally suitable for mass production.

[0040] In a preferred embodiment, the packaging method further comprises step S5: winding the strapping band around the outside of the film layer. Specifically, the strapping band may be wound once around the outside of the outline main body of the packaging structure 100 in the vertical direction. In step S5, a plurality of spaced-apart strapping bands may be wound around the outside of the film layer. The strapping bands can not only further strengthen the stability of the whole packaging structure 100, but also serve as gripping places for workers upon transportation, thereby facilitating the workers to transport the refrigerator.

[0041] The packaging structure for a refrigerator proposed by embodiments of the present invention comprises the top seat, the bottom seat and four vertical side edges and employs the film which is heated to shrink to form a layer of outer film, the outer film tightly wraps the top seat, the bottom seat and the four vertical side edges due to shrinking upon heating, into a whole which is not apt to fall apart, so that the packaging manner of covering the whole refrigerator with paper needn't be employed, the cost can be saved and the size can be reduced.

[0042] The film layer in the packaging structure for the refrigerator proposed by the embodiment of the present invention is made of a transparent material so that the user can view the status of the product of the refrigerator without opening the packaging box.

[0043] The film layer of the packaging structure for a refrigerator proposed by the embodiment of the present invention has good chemical stability and water resistance, thereby effectively avoiding problems such as damp, mold and falling-apart problems of the packaging structure due to environmental factors.

[0044] Although embodiments of the present invention have been illustrated and described above, it may be appreciated that the above embodiments are exemplary and cannot be construed as limiting the present invention. Those having ordinary skill in the art may make changes, modifications, replacements and variations for the above embodiments within the scope of the present invention.

Claims

1. A packaging structure for a refrigerator, comprising:

a bottom seat supported on a bottom of the re-

frigerator;
a top seat covering a top of the refrigerator;
four vertical side edges, both ends of each vertical side edge being respectively connected with the bottom seat and the top seat, and the four vertical side edges being respectively disposed at four corners of the bottom seat and the top seat; the bottom seat, the top seat and the four vertical side edges form an accommodation space for accommodating the refrigerator;
wherein the packaging structure further comprises a film layer which wraps an outer surface of an outline main body formed by the bottom seat, the top seat and the four vertical side edges by means of film shrinking upon heating.

2. The packaging structure for a refrigerator according to claim 1, wherein the packaging structure further comprises an upper cover plate which covers the outside of the top seat, and the film layer wraps an outer surface of an outline main body formed by the upper cover plate, the bottom seat and the four vertical side edges.

3. The packaging structure for a refrigerator according to claim 2, wherein the packaging structure further comprises a lower cover plate which covers the outside of the bottom seat, and the film layer wraps an outer surface of an outline main body formed by the upper cover plate, the lower cover plate and the four vertical side edges.

4. The packaging structure for a refrigerator according to claim 1, wherein the bottom seat, the top seat and the four vertical side edges are all made of a shock-absorbing material.

5. The packaging structure for a refrigerator according to claim 1, wherein a hollow is provided in the middle of the bottom seat, an area of the hollow is between one third and two thirds of the area of the bottom seat, a plurality of through holes are disposed at predetermined positions of the top seat, and the plurality of through holes are evenly arranged.

6. The packaging structure for a refrigerator according to claim 1, wherein the packaging structure further comprises a strapping band which is wound around the outside of the film layer.

7. The packaging structure for a refrigerator according to claim 1, wherein the material of the film layer comprises polyethylene or polyvinyl chloride.

8. The packaging structure for a refrigerator according to claim 1, wherein a plurality of spaced-apart protrusions are disposed on inner surfaces of the vertical side edges facing towards the refrigerator, and are configured to abut against the outer surface of the refrigerator.

9. A packaging method for a refrigerator, wherein the packaging method comprises the following steps:

placing a refrigerator on a bottom seat;
fixing four vertical side edges at four corners of the bottom seat respectively;
placing a top seat on the top of the refrigerator and fixing the top seat with the four vertical side edges;
covering an outer surface of an outline main body formed by the bottom seat, the top seat and the four vertical side edges with a film, and heating the film so that the film shrinks to form a film layer.

10. The packaging method for a refrigerator according to claim 9, wherein the packaging method further comprises: winding a strapping band around the outside of the film layer.

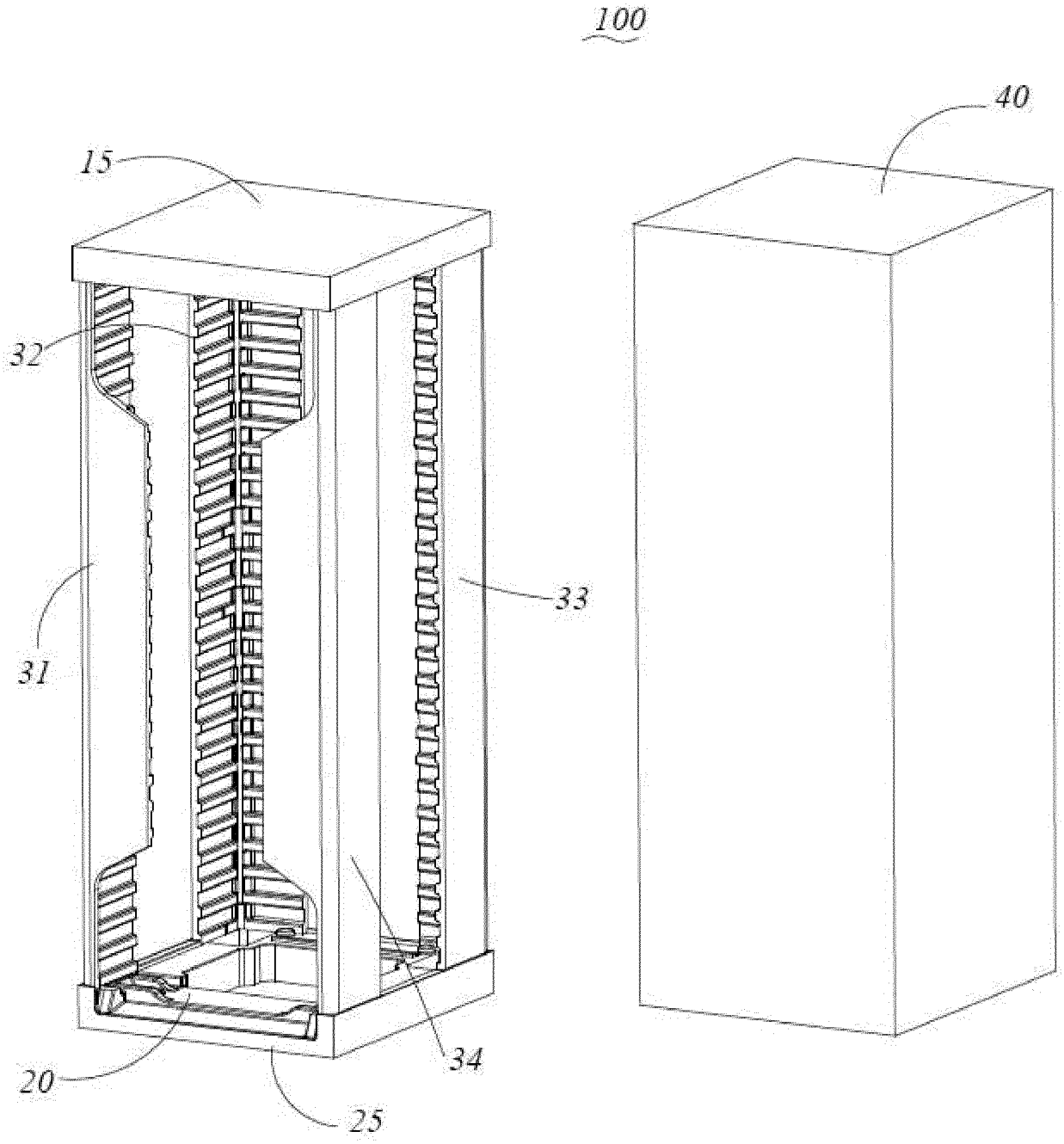

FIG.1

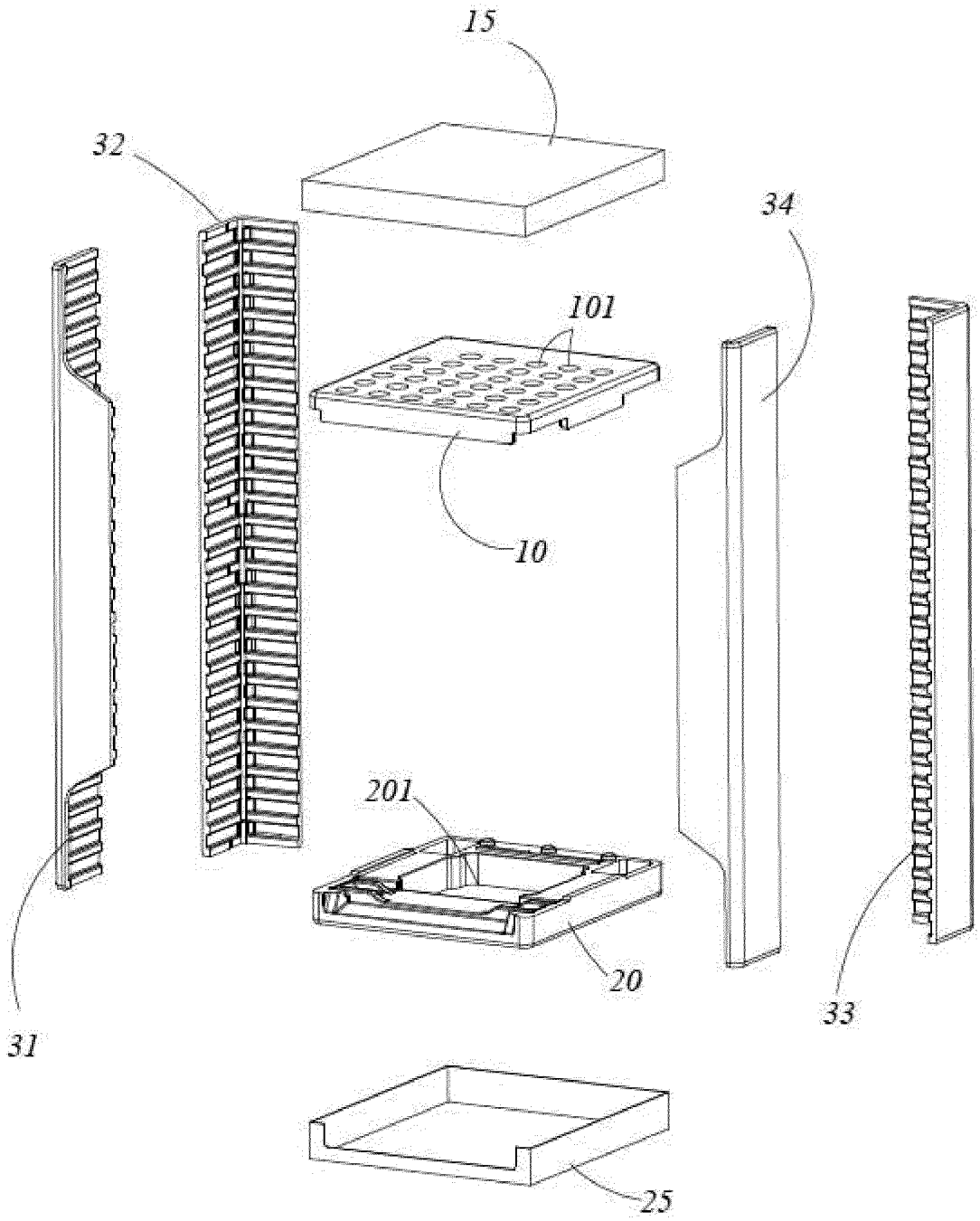

FIG.2

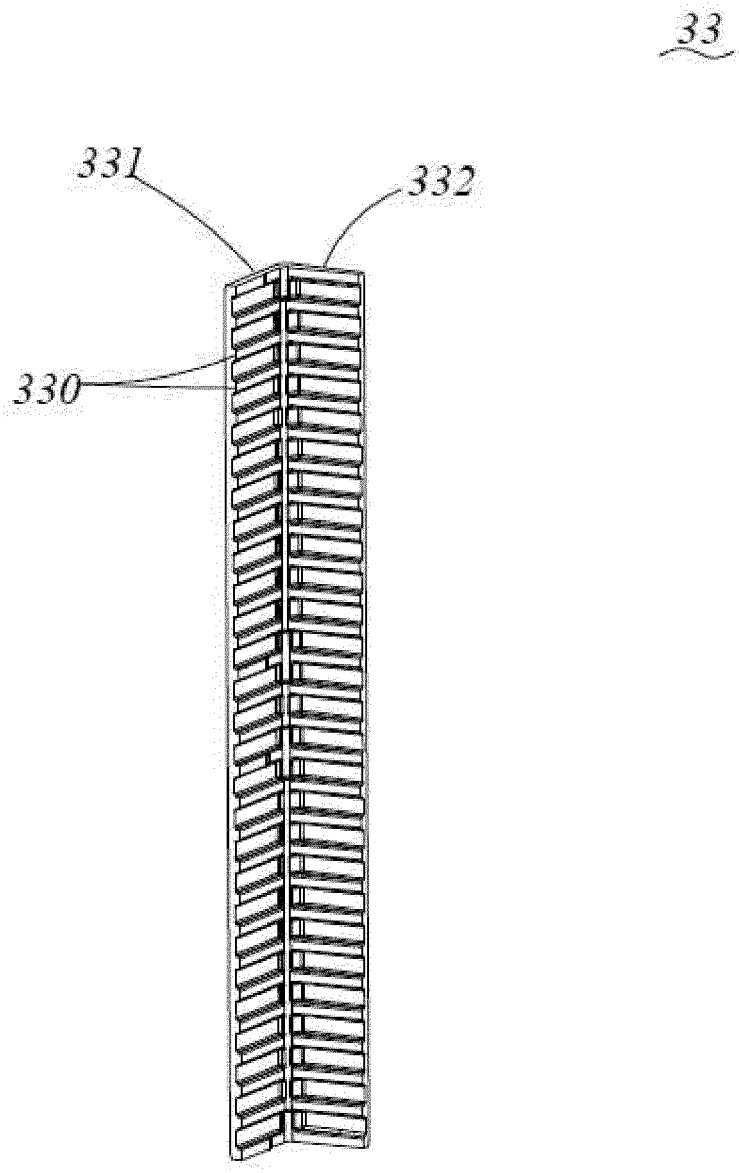

FIG.3

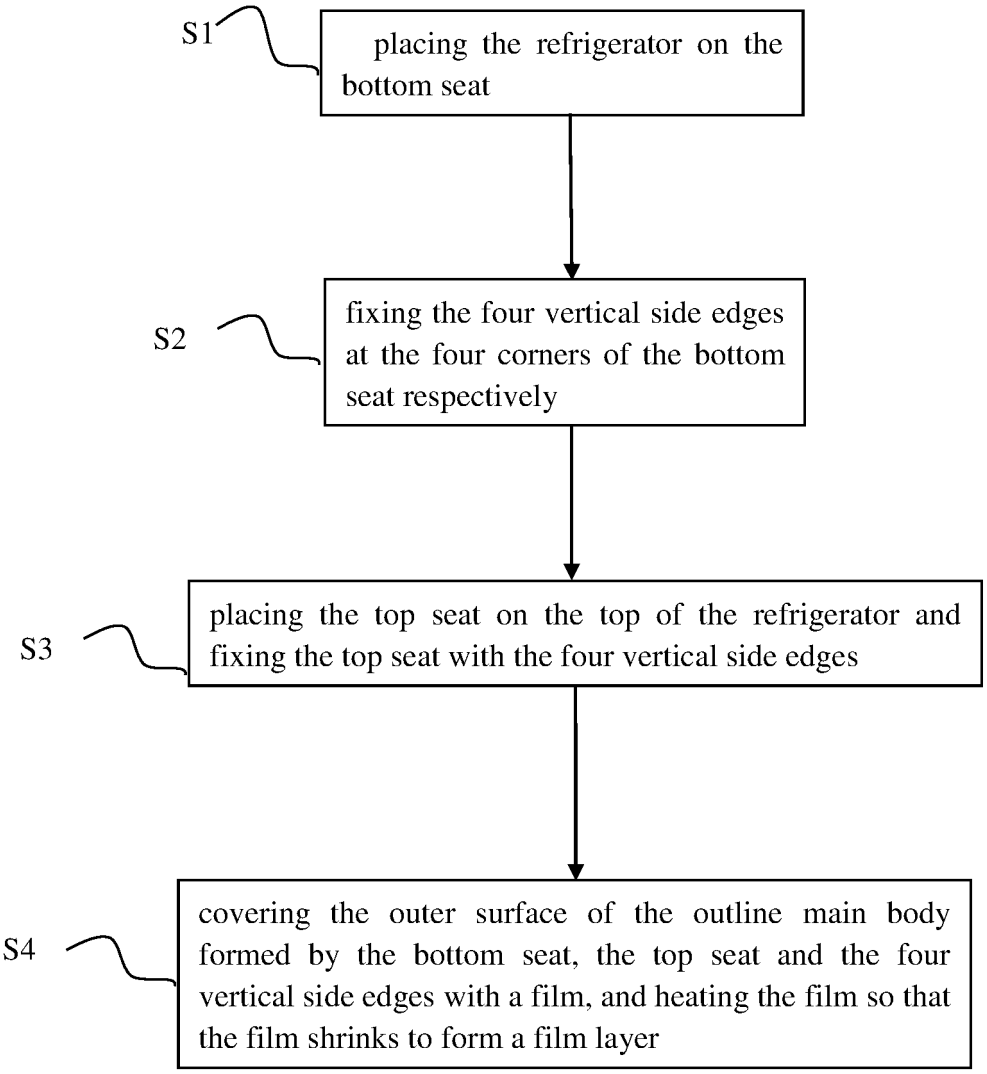
S1
placing the refrigerator on the bottom seat
S2
fixing the four vertical side edges at the four corners of the bottom seat respectively
S3
placing the top seat on the top of the refrigerator and fixing the top seat with the four vertical side edges
S4
covering the outer surface of the outline main body formed by the bottom seat, the top seat and the four vertical side edges with a film, and heating the film so that the film shrinks to form a film layer

FIG.4

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2020/094072

A. CLASSIFICATION OF SUBJECT MATTER

B65D 85/68(2006.01)i; B65D 85/00(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CNABS; CNTXT; CNKI; VEN; WOTXT; EPTXT; USTXT: 海尔, 包装, 膜, 热缩, 收缩, 潮, 透明, package, film, shrink+, damp+, humid+, wet, transpa+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
PX	CN 111137577 A (QINDAO HAIER REFRIGERATOR CO., LTD. et al.) 12 May 2020 (2020-05-12) claims 1-10	1-10
X	CN 2136816 Y (TIAN, Shunchang) 23 June 1993 (1993-06-23) description, page 2 line 17 to page 3 line 9, figures 1-8	1-10
X	CN 202089441 U (SUZHOU SAMSUNNG ELECTRONICS CO., LTD.) 28 December 2011 (2011-12-28) description, paragraphs [0030]-[0056], and figures 1-7	1-10
X	WO 0020301 A1 (MARZANO FORM DI MARZANO ANNA et al.) 13 April 2000 (2000-04-13) description, page 5 line 12 to page 7 line 20, figures 1-6	1-10
X	US 6155419 A (ILLINOIS TOOL WORKS INC.) 05 December 2000 (2000-12-05) description, column 3, line 10 to column 6, line 63, and figures 1-3	1-10
A	CN 107640439 A (SUZHOU BAOTEYUAN ELECTRONIC TECHNOLOGY CO., LTD.) 30 January 2018 (2018-01-30) entire document	1-10

☑ Further documents are listed in the continuation of Box C. ☑ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
11 August 2020	**17 September 2020**
Name and mailing address of the ISA/CN **China National Intellectual Property Administration (ISA/CN)** **No. 6, Xitucheng Road, Jimenqiao, Haidian District, Beijing 100088** **China** Facsimile No. **(86-10)62019451**	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2020/094072

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 101850873 A (HAIER GROUP CORPORATION et al.) 06 October 2010 (2010-10-06) entire document	1-10

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2020/094072

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