

From the INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing <i>(day/month/year)</i> 06 June 2018	
Applicant's or agent's file reference 2017A8122PCT	FOR FURTHER ACTION See paragraph 2 below
International application No. PCT/CN2018/078291	International filing date <i>(day/month/year)</i> 07 March 2018
Priority date <i>(day/month/year)</i> 08 March 2017	
International Patent Classification (IPC) or both national classification and IPC F25C 1/24(2018.01)i	
Applicant QINGDAO HAIER JOINT STOCK CO., LTD	

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/	Date of completion of this opinion	Authorized officer

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - the international application in the language in which it was filed.
 - a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a)).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. forming part of the international application as filed:
 - in the form of an Annex C/ST.25 text file.
 - on paper or in the form of an image file.
 - b. furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. furnished subsequent to the international filing date for the purposes of international search only:
 - in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

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Box No. II Priority

1. The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43*bis*.1 and 64.1) is the claimed priority date.
2. This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:
 - [2] The priority claim of the present application is considered to be valid upon verification.

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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement		
1. Statement	Novelty (N)	Claims	1-8 _____ YES None _____ NO
	Inventive step (IS)	Claims	None _____ YES 1-8 _____ NO
	Industrial applicability (IA)	Claims	1-8 _____ YES None _____ NO
2. Citations and explanations :			
[1] Reference is made to the following reference document:			
[2] D1: CN 203928532 U, D2: EP 2667121 A2, D3: CN 101738043 A			
[3] Novelty (PCT Article 33(2))			
[4] D1 is the prior art close to claims 1-8, and discloses an ice maker (see description, paragraphs [0025] - [0030], and figures 1-6): the ice maker comprises a deflector disc 12 (corresponding to a water filling device in claim 1), an ice-making bin 13 and an ice storage bin 14 (corresponding to an ice-making module in claim 7), wherein the deflector disc 12 comprises a water outlet 122 and a connecting wall 123 (corresponding to a water guiding portion in claim 1); the water outlet 122 is located above the ice-making bin 13; a measuring cup 30 is used to be filled with water and the water is poured into the deflector disc 12, and therefore, an opening on the top of the deflector disc 12 is a water filling port. The difference between claims 1 and 7 and D1 lies in that the water guiding portion extends outward from a water outlet. Therefore, claim 1 and its dependent claims 2-6 are novel, and claim 7 and its dependent claim 8 are novel.			
[6] Inventive step (PCT Article 33(3))			
[7] D2 discloses a water filling device 26 and an ice-making device (see description, paragraphs [0035] - [0056], and figures 1-7): the water filling device 26 comprises a water inlet 32 (corresponding to a water outlet in claim 1); water flows into an ice-making disc 16 through the water inlet 32; and a guiding edge 44 and a collection edge 48 (corresponding to a water guiding portion in claim 1) extending outward from the water inlet 32 are formed at the edge of the water inlet 32. It can be seen that the difference between claims 1 and 7 and D1 is already disclosed in D2 and have the same function, namely, D2 provides the technical motivation of the water guiding portion extending outward from the water outlet. Therefore, on the basis of D1 combined with D2, it would have been obvious to arrive at the technical solutions of claims 1 and 7, and claims 1 and 7 do not involve an inventive step.			
[8] D2 further discloses (see above) providing a discharge rib 38 at a certain distance away from the collection edge 48 in order to avoid forming ice cylinders. It would have been readily conceivable to a person skilled in the art to set the water guiding portion as a rib-shaped structure extending outward from the water injection port to the water outlet on the basis of D2. That is a simple transformation, and therefore, claim 2 does not involve an inventive step.			
[9] The additional technical features of claims 3-6 are either disclosed in D2, or conventional technical means in the art; some of the additional technical features of claim 8 have been disclosed in D3 (see description, paragraphs [0059] - [0060], and figures 11 and 12): a bin cover 340 is provided above an ice-making bin 350, the bin cover 340 has a water filling hole 341 so as to fill in water for making ice; in addition, the remaining additional technical feature of the water injection port of the water filling device inserting through a water filling hole is a conventional technical means in the art, and therefore, claims 3-6 and 8 do not involve an inventive step.			
[11] Industrial applicability (PCT Article 33(4))			
[12] The subject matter of claims 1-8 can be made or used in industry, and is therefore industrially applicable under PCT Article 33(4).			