

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing

(day/month/year)

20 March 2024

Applicant's or agent's file reference

C23W7748Z

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/CN2023/143467

International filing date (day/month/year)

29 December 2023

Priority date (day/month/year)

12 January 2023

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

A61H 19/00(2006.01)i

Applicant

HYTTO PTE. LTD. et al.

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/

**CHINA NATIONAL INTELLECTUAL
PROPERTY ADMINISTRATION**
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Date of completion of this opinion

12 March 2024

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**WRITTEN OPINION OF THE
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International application No.

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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(b)).
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.
 - b. ☐ furnished subsequent to the international filing date for the purposes of international search (Rule 13*ter*.1(a)),

☐ accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.
4. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established to the extent that a meaningful opinion could be formed without a WIPO Standard ST.26 compliant sequence listing.
5. Additional comments:

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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	1-20	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

The written opinion is made base on the anticipation in BOX NO. VIII.

D1: US11452665B1

D2: US2003225372A1

I: Novelty and inventive step:

D1 discloses a massager (corresponding to a stimulation device) which may generate a negative pressure to massage and stimulate the sensitive portions (see columns 2-5 in the description, figures 1-10). The massager 1 comprises: a support shell 20 (corresponding to an exterior housing) including an adsorption port 100 (corresponding to an opening); a battery 40 (corresponding to a power source) disposed within the support shell 20; a motor 31 disposed within the support shell 20 and receiving power from the battery 40 to generate a spinning motion; a transmission assembly 32 (corresponding to a motion converter) transforming the spinning motion from the motor 31 into a reciprocating motion; a shell 36 and a movable member 33 (combination of them corresponding to an air cylinder) configured to receive the reciprocating motion from the transmission assembly 32 and expand and contract a volume of the receiving space 361 (corresponding to a chamber) therefrom, the receiving space 361 delivering air inhale and air blow to the adsorption port 100 of the support shell 20 as the volume of the receiving space 361 expands and contracts, respectively.

D2 discloses an implantable infusion device with a mechanical sealing system (see paragraphs [0017]-[0036], figures 1-9). The mechanical sealing system comprising a motor pin connector assembly 650 and a pump motor cover 641 (combination of them corresponding to an impermeable structure) that serve to seal the pump motor 660 and wires 651 from the corrosive pump compartment 640. Since water vapor, ions, and compounds are sealed from the motor compartment 670, the potential for corrosion of the pump motor 660 and wires 651 is greatly reduced (see paragraph [0030], figure 6).

1) Claim 1 differs from D1 in that: a) an impermeable structure separating the air cylinder from the motor and power source, within the exterior housing.

Claim 12 differs from D1 in that: b) an electromagnetic coil disposed within the housing and receiving power from the power source to generate an intermittent magnetic field; the air cylinder configured to expand and contract a volume of a chamber thereof by the intermittent magnetic field of the electromagnetic coil; an impermeable structure separating the air cylinder from the electromagnetic coil, within the exterior housing.

Claim 17 differs from D1 in that: c) a bar magnet connected to an output shaft of the motor and configured to spin under the spinning motion of the motor to generate a magnetic field of alternating polarity; the air cylinder configured to expand and contract a volume of a chamber thereof in response to the alternating polarity of the spinning bar magnet; an impermeable structure separating the air cylinder from the bar magnet, motor, and power source, within the exterior housing.

As to different feature a), based on the technical implication of D2, it would be obvious for a person skilled in the art to combine D1 and D2, and different feature a) is considered as a common design which is obvious for a person skilled in the art.

As to different features b) and c), D1 discloses that: the drive device may be an electromagnetic drive member; the electromagnetic drive member includes a first magnetic member and a second magnetic member connected to the drive end; one of the first magnetic member and the second magnetic member includes wires, and the

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Box No. V

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citations and explanations supporting such statement**

other of the first magnetic member and the second magnetic member includes a magnet; the magnet may be a permanent magnet or an electric magnet (see column 5). Based on the technical implication of D2, it would be obvious for a person skilled in the art to combine D1 and D2, and different features b) and c) are all considered as common designs which are obvious for a person skilled in the art.

Therefore, claims 1,12,17 meet PCT Article 33(2) but do not meet PCT Article 33(3).

2) As to claims 2-4,7,13,18, the additional features of claims 2,4,7 are disclosed by D1: a shell 36 (corresponding to a stationary member); a movable member 33 (corresponding to a motional member) configured to reciprocate with respect to the shell 36; wherein the receiving space 361 is defined by at least an inside of the shell 36; wherein the shell 36 is a stationary sleeve (see figure 1) that is stationary with respect to the support shell 20; wherein the movable member 33 is a piston (see figure 9) configured to move up and down inside the the shell 36, which is concentric thereto, the moving up reducing the volume of the receiving space 361 and the moving down enlarging the volume of the receiving space 361; wherein the adsorption port 100 in the exterior of the support shell 20 is disposed at a top of the receiving space 361, the adsorption port 100 delivering positive pressure therethrough when the volume of the receiving space 361 is reducing or contracting and delivering negative pressure therethrough when the volume of the receiving space 361 is enlarging or expanding (see as above). Other additional features are all considered as common designs which are obvious for a person skilled in the art.

As to claims 5-6,16,19, based on the disclosure of D2, the specific structures and connection relationships of the impermeable structure are all considered as common designs which are obvious for a person skilled in the art.

As to claims 8-9, 20, the additional features are all considered as common designs which are obvious for a person skilled in the art.

As to claims 10-11, D1 discloses that: the support shell 20 includes a top section and a bottom section; the top section includes the shell 36 and the movable member 33, and the bottom section includes the battery 40, the motor 31 and the transmission assembly 32 (see figure 1). Other additional features are all considered as common designs which are obvious for a person skilled in the art.

As to claims 14-15, based on the disclosure of D1 (see column 5), the addition features of claims 14-15 are all considered as common designs which are obvious for a person skilled in the art.

Therefore, claims 2-11,13-16,18-20 meet PCT Article 33(2) but do not meet PCT Article 33(3).

II: Industrial applicability:

Claims 1-20 meet PCT Article 33(4).

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

The term 'the spinning potion' in claim 1 should be 'the spinning motion'.

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The defined content ‘the chamber delivering air inhale and air blow to the opening of the exterior housing as the chamber volume contracts and expands, respectively’ in claim 1 is not supported by the specification, so claim 1 does not meet PCT Article 6.

The defined content ‘the opening delivering positive pressure therethrough when the volume of the chamber is expanding and delivering negative pressure therethrough when the volume of the chamber is contracting’ in claim 7 is not supported by the specification, so claim 7 does not meet PCT Article 6.

It is logical to anticipate that: the defined content ‘the chamber delivering air inhale and air blow to the opening of the exterior housing as the chamber volume contracts and expands, respectively’ in claim 1 should be ‘the chamber delivering air inhale and air blow to the opening of the exterior housing as the chamber volume expands and contracts, respectively’; the defined content ‘the opening delivering positive pressure therethrough when the volume of the chamber is expanding and delivering negative pressure therethrough when the volume of the chamber is contracting’ in claim 7 should be ‘the opening delivering negative pressure therethrough when the volume of the chamber is expanding and delivering positive pressure therethrough when the volume of the chamber is contracting’.

The search report and written opinion are made base on the anticipation.