

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference C23W7748Z		FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/CN2023/143467	International filing date (<i>day/month/year</i>) 29 December 2023	(Earliest) Priority Date (<i>day/month/year</i>) 12 January 2023	
Applicant HYTTO PTE. LTD. et al.			

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out 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)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☐ the text is approved as submitted by the applicant.
☒ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 4
☒ as suggested by the applicant.
☐ as selected by this Authority, because the applicant failed to suggest a figure.
☐ as selected by this Authority, because this figure better characterizes the invention.
- b. ☐ none of the figures is to be published with the abstract.

Box No. IV **Text of the abstract (Continuation of item 5 of the first sheet)**

A stimulation device (100) includes an exterior housing (1) including an opening (10). A power source (5) is disposed within the exterior housing (1). A motor (31) is disposed within the exterior housing (1) and the motor (31) receives power from the power source (5) to generate a spinning motion. A motion converter (32) transforms the spinning motion from the motor (31) into a reciprocating motion. An air cylinder (2) receives the reciprocating motion from the motion converter (32) and expands and contracts a volume of a chamber (20) therefrom, the chamber (20) delivering an alternating positive and negative pressure to the opening (10) of the exterior housing (1) as the chamber (20) volume contracts and expands, respectively. An impermeable structure (4) separates the air cylinder (2) from the motor (31) and power source (5), within the exterior housing (1).

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2023/143467

A. CLASSIFICATION OF SUBJECT MATTER

A61H 19/00(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)

IPC: A61H19/-

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)

DWPI,WPABS,CNXTX,ENTXT,CNKI:sexual,stimulat+,pressure,opening,magnetic,power,battery,motor,spin+,rotat+, reciproc+,impermeable,seal+,air w cylinder,piston,sleeve,electromagnetic,coil

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 11452665 B1 (SHENZHEN SVAKOM TECH. CO., LTD.) 27 September 2022 (2022-09-27) columns 2-5 in the description, figures 1-10	1-20
Y	US 2003225372 A1 (CHRISTENSON, Steven R. et al.) 04 December 2003 (2003-12-04) paragraphs [0017]-[0036], figures 1-9	1-20
A	CN 110831562 A (FUN FACTORY G.M.B.H.) 21 February 2020 (2020-02-21) the whole document	1-20
A	CN 107280939 A (EIS G.M.B.H.) 24 October 2017 (2017-10-24) the whole document	1-20
A	CN 209422424 U (YUAN, Weiyue) 24 September 2019 (2019-09-24) the whole document	1-20
A	US 2022175612 A1 (EIS G.M.B.H.) 09 June 2022 (2022-06-09) the whole document	1-20



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

“D” document cited by the applicant in the international application

“E” earlier application or patent but published on or after the international filing date

“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

“O” document referring to an oral disclosure, use, exhibition or other means

“P” document published prior to the international filing date but later than the priority date claimed

“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

“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

12 March 2024

Date of mailing of the international search report

20 March 2024

Name and mailing address of the ISA/CN

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/CN2023/143467

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
US	11452665	B1	27 September 2022	JP	3237148	U	15 April 2022
				WO	2022247321	A1	01 December 2022
US	2003225372	A1	04 December 2003	EP	1509263	A1	02 March 2005
				EP	1509263	B1	07 June 2006
				WO	03101512	A1	11 December 2003
				US	7264611	B2	04 September 2007
CN	110831562	A	21 February 2020	US	2020214932	A1	09 July 2020
				US	11596574	B2	07 March 2023
				EP	3648728	A2	13 May 2020
				WO	2019007988	A2	10 January 2019
CN	107280939	A	24 October 2017	EP	3228297	A1	11 October 2017
				EP	3228297	B1	17 July 2019
				JP	2017185220	A	12 October 2017
				JP	6893105	B2	23 June 2021
				JP	2021090821	A	17 June 2021
				JP	7150910	B2	11 October 2022
				WO	2017174607	A1	12 October 2017
				US	2017281457	A1	05 October 2017
				US	11484463	B2	01 November 2022
				EP	3988071	A1	27 April 2022
				US	2022233395	A1	28 July 2022
				EP	3563822	A1	06 November 2019
				EP	3563822	B1	22 December 2021
CN	209422424	U	24 September 2019	CN	109223498	A	18 January 2019
US	2022175612	A1	09 June 2022	WO	2022122810	A1	16 June 2022
				EP	4259059	A1	18 October 2023
				CN	116568254	A	08 August 2023