

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43*bis*.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/IB2022/062469

International filing date (day/month/year)
19.12.2022

Priority date (day/month/year)
22.12.2021

International Patent Classification (IPC) or both national classification and IPC
INV. A01M7/00 B05B9/08

Applicant
SCARAB SOLUTIONS LIMITED

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 43 <i>bis</i> .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 usually 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 66.1 *bis*(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:



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Date of completion of
this opinion

see form
PCT/ISA/210

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 43bis.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.
 - b. ☐ furnished subsequent to the international filing date for the purposes of international search (Rule 13ter.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:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>7-10</u>
	No: Claims	<u>1-6, 11-23</u>
Inventive step (IS)	Yes: Claims	<u>7, 8</u>
	No: Claims	<u>1-6, 9-23</u>
Industrial applicability (IA)	Yes: Claims	<u>1-23</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

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

see separate sheet

1 **Re Item V**

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1.1 Reference is made to the following documents:

- D1 WO 2020/239664 A1 (BAYER AG [DE]) 3 December 2020 (2020-12-03)
- D2 US 9 338 938 B2 (CASH MICHAEL F [US]; MAYFIELD DOUGLAS B [US] ET AL.) 17 May 2016 (2016-05-17)
- D3 DE 10 2013 109785 A1 (KOUBACHI AG [CH]) 12 March 2015 (2015-03-12)
- D4 US 2021/072064 A1 (GREGORY MARK ALLEN [US] ET AL) 11 March 2021 (2021-03-11)
- D5 US 9 788 536 B1 (DIXON JEREMY D [US]) 17 October 2017 (2017-10-17)
- D6 US 11 029 180 B2 (CRAIG COREY [US]) 8 June 2021 (2021-06-08)
- D7 EP 3 348 329 A1 (BAYER CROPSCIENCE AG [DE]) 18 July 2018 (2018-07-18)

1.2 The present application does not meet the criteria of Article 33(2) PCT, because the **subject-matter of claim 1 is not new.**

1.2.1 D1 (WO 2020/239664 A1) discloses (the inserted references apply to D1; however, the entire teaching of D1 is highly relevant):

- a **monitoring apparatus** (10) for monitoring an operation of a fluid dispensing system (see page 1, lines 3-9 and figures 2a, 2b, 2c),

- [remark: *the fluid dispensing system according to the wording of claim 1 does not form part of the claimed apparatus which only has to be adapted for monitoring the operation of a corresponding dispensing system; however, also D1 describes such a fluid dispensing system*] wherein the fluid dispensing system comprises at least one storage unit (22, 23) for storing a fluid, a dispensing arrangement (27), and a pumping arrangement (24, 25) for providing a flow of the fluid from the at least one storage unit to the dispensing arrangement (see figures 2a, 2b and 2c as well as page 25, lines 5-33);

- wherein the monitoring apparatus (10) comprises:

- a **sensing arrangement** (34, 35, 36) that, when in operation, is connected to the fluid dispensing system, wherein the sensing arrangement measures operational performance [remark: *according to the description of the present application and to dependent claim 12 for example, this operational performance includes the location of the fluid dispensing system*] of the flow of the fluid dispensed through the dispensing arrangement (see for example page 6, line 4 to page 7, line 3; page 7, lines 11-29; page 12, line 4 - page 8, line 3; page 14, lines 5-6; figures 2a, 2b, 2c); and

- a **server arrangement** that is communicably coupled to the sensing arrangement via a data communication network (see for example page 7, line 31 - page 8, line 12; page 11, lines 9-15), wherein the server arrangement:

- **acquires the operational performance** of the flow of the fluid dispensed and **generates an actionable information** for adjusting optimal dispensing of the fluid; and page 7, line 31 - page 8, line 2; page 8, lines 23-26);

- **provides the actionable information** to a user device (14 32-35) to report an operational status of the fluid dispensing system (see for example page 8, lines 9-12; page 14, lines 8-13; figure 8).

- 1.2.2 The subject-matter of claim 1 is formulated in such a broad way (e.g. claim 1 does not specify the kind of sensing arrangement, nor does it define the operational performance measured by the sensing arrangement or the actionable information, nor does the claim give specific examples what components a server arrangement has to comprise or the kind of user device) that a lot of prior art deprives it from novelty. The documents D2, D3, D4, D5, D6 and D7 are mentioned as novelty destroying documents (for details see the passages cited in the search report) and this exemplarily for all these prior art documents.

- 1.3 The present application does not meet the criteria of Article 33(2) PCT, because the **subject-matter of claim 18 is not new**.

D1 (as well as the documents D2-D7) discloses for the same reasons as given under point 1.2.1 the method for monitoring operation of a fluid dispensing system according to claim 18 since this method comprises the same features as claim 1.

- 1.4 Dependent claims 2-6, 9-17, 19-23 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step.

- 1.4.1 The prior art, in particular document D1 already describes the additional features of dependent claims 2-6, 11-15 and 19-23, see the entire document. Therefore, the subject-matter of these dependent claims is not new.

- 1.4.2 The additional features of dependent claims 9 and 10 appear to relate to constructional changes of the device of claim 1 which come within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of claims 9 and 10 lacks an inventive step.

- 1.4.3 The features of dependent claims 16 and 17 have already been employed for the same purpose in a similar device (see for example D4 (US 2021/072064 A1), paragraph [0048]). It would therefore be obvious to the person skilled in the art to apply these features with corresponding effect to a device according to D1, thus arriving at a device according to claims 16 and 17.

- 1.5 The combination of the features of dependent claims 7, 8 is neither known from, nor rendered obvious by, the available prior art. The reasons are as follows:

None of the cited documents describes the specific shape of the sensing arrangement which should support the user in holding the sensing arrangement in a more stable manner. Only D4 mentions the influence of a user's movement. However, it does not provide a solution for holding the device more stable, let alone a specific shape of the sensing arrangement.

Therefore, the skilled person is not motivated by the teaching of the known prior art, to provide a sensing arrangement with a wedge shape or a trapezoidal prism shape as defined in dependent claims 7 and 8.

2 Re Item VII

Certain defects in the international application

- 2.1 Independent claims 1 and 18 are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art, in particular D1, being placed in the preamble (Rule 6.3(b)(i) PCT) and the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

- 2.2 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in D1-D7 is not mentioned in the description, nor are these documents identified therein.