

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

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

To:

see form PCT/ISA/220

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/EP2019/083198

International filing date (day/month/year)  
29.11.2019

Priority date (day/month/year)  
30.11.2018

International Patent Classification (IPC) or both national classification and IPC  
INV. B62D55/075

Applicant  
KÖPPEN, Rob

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 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 66.1bis(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:



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Date of completion of  
this opinion

see form  
PCT/ISA/210

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**Box No. I Basis of the opinion**

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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:
    - 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 13ter.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 13ter.1(a)).
    - on paper or in the form of an image file (Rule 13ter.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. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	<u>1-14</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	<u>1-14</u>
	No: Claims	
Industrial applicability (IA)	Yes: Claims	<u>1-14</u>
	No: Claims	

2. Citations and explanations

**see separate sheet**

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**Box No. VII Certain defects in the international application**

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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 US 2015/360736 A1 (CHOI HYOUK RYEOL [KR] ET AL) 17 December 2015 (2015-12-17) cited in the application

D2 CN 207 983 328 U (SHAO LIDAN) 19 October 2018 (2018-10-19)

D3 US 2017/297589 A1 (ZHOU GONGBO [CN] ET AL) 19 October 2017 (2017-10-19)

2 D1 is regarded as being the prior art closest to the subject-matter of claim 1, and discloses in its claims 10-13, figures 1-8 and paragraph [0078]:

A remotely controlled crawler device [200] for use on elongated cylindrical members comprising ~~a pair of~~ *three* housings, each housing including a continuous looped track [100], part of the track being arranged to run along one side of the housing, means for driving the track [120 or 110], and wherein the track includes ~~a belt a series of shoes and where the outwardly facing side of each shoe includes a generally semi-circular recess of diameter corresponding to that of the ECM,~~ and means for holding the ~~two~~ *three* housings together with the portions of the track running along one side of each housing being engaged on opposite sides of the ECM, whereby driving the circulating tracks causes the crawler to move along the ECM, and means for connecting the crawler to an external control unit remote from the crawler.

2.2 The subject-matter of claim 1 therefore differs from this known remotely controlled crawler device in that *two housings instead of three are used and that the looped track contains shoes adapted to the outer shape of the ECM*. It is therefore new (Article 33(2) PCT).

2.3 The problem to be solved by the present invention may be regarded as to improve the crawler device's traction/grip on the ECM.

2.4 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

2.4.1 Even though it might seem obvious to adapt the belt into a series of shoes with adapted shape, such a modification would do away with one of the benefits of the device of document D1, i.e. the wide adaptability to various diameters. For the same reason, it is not obvious to reduce the three housings to two housings as this would render the configuration less widely deployable. Given the lack of examples or hints towards these modifications in the available prior art, the person skilled in the art would not be inspired or motivated to solve the problem at hand using the modifications proposed in claim 1. **(Claim 1)**

3 Claims 2-14 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step. **(Claims 2-14)**

4 **Re Item VII**

**Certain defects in the international application**

4.1 The features of claims 1-16 are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).