

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference YZGJ2017007	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/CN2017/099788	International filing date ( <i>day/month/year</i> ) 31 August 2017 (31.08.2017)	Priority date ( <i>day/month/year</i> ) 31 August 2016 (31.08.2016)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant ZHEJIANG LANGXIANG INDUSTRIAL CO., LTD.			

<p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																								
<p>3. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</p>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input checked="" type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application
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	Date of issuance of this report 05 March 2019 (05.03.2019)
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From the INTERNATIONAL SEARCHING AUTHORITY

To:

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing (day/month/year) <b>07 December 2017</b>	
Applicant's or agent's file reference <b>YZGJ2017007</b>	<b>FOR FURTHER ACTION</b> See paragraph 2 below
International application No. <b>PCT/CN2017/099788</b>	International filing date (day/month/year) <b>31 August 2017</b>
Priority date (day/month/year) <b>31 August 2016</b>	
International Patent Classification (IPC) or both national classification and IPC B62K 5/05(2013.01)i; B62K 5/06(2006.01)i; B62K 5/08(2006.01)i; B62K 25/08(2006.01)i	
Applicant <b>ZHEJIANG LANGXIANG INDUSTRIAL CO., LTD.</b>	

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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WRITTEN OPINION OF THE  
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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 filed or furnished:
  - a. (means)
    - on paper
    - in electronic form
  - b. (time)
    - in the international application as filed
    - together with the international application in electronic form
    - subsequently to this Authority for the purposes of search
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 in 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:
  - [1] It has been verified that the priority claim is valid.

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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	<u>1-9</u>	YES
	Claims	<u>None</u>	NO
Inventive step (IS)	Claims	<u>1-9</u>	YES
	Claims	<u>None</u>	NO
Industrial applicability (IA)	Claims	<u>1-9</u>	YES
	Claims	<u>None</u>	NO

## 2. Citations and explanations :

- [1] On the basis of the reasonable expectation in Box VIII, the present opinion is formed with reference to the following document:
- [2] D1: US 8814186 B1
- [3] **1.Novelty**
- [4] The subject matter of claim 1 relates to a reverse tricycle. D1 discloses the subject matter and discloses the following technical features (description, column 2, line 13 to column 3, line 11, and fig. 1-8): comprising a support mechanism and a steering device, wherein the support mechanism comprises a vehicle frame 3 and a two-front wheel fixing frame; the steering device comprises a steering column; the vehicle frame comprises a vehicle frame rear segment, a vehicle frame middle segment, and a vehicle frame front segment; the vehicle frame front segment is fixedly connected to the two-front wheel fixing frame; the two-front wheel fixing frame is fixed on two front vehicle wheels 2, 2'; the two-front wheel fixing frame comprises a left fixing base and a right fixing base; the left fixing base is fixed on the wheel hub 20 of a left front wheel 2, and the right fixing base is fixed on the wheel hub 20' of a right front wheel 2'; further comprising a front suspension 10 and a support arm combination connected to the front end of a vehicle frame main body, wherein the front suspension 10 comprises a hollow cavity 100 used for mounting a transverse front shock absorber 13 and disposed at the middle part, an upper front hollow cavity 101 disposed at the upper front part, a lower front hollow cavity 102 disposed at the lower front part, and a lower rear hollow cavity 102' disposed at the lower rear part; the support arm combination comprises an upper left support arm 11, an upper right support arm 11', a lower left support arm 12 front part, a lower right support arm 12' front part, a lower left support arm 12 rear part, and a lower right support arm 12' rear part; the inner end of the upper left support arm 11 and the inner end of the upper right support arm 11' are hingedly mounted in the upper front hollow cavity 101 and the upper rear hollow cavity 101' by means of a first pin shaft 103; the inner end of the lower left support arm 12 front part and the inner end of the lower right support arm 12' front part are mounted in the lower front hollow cavity 102 by means of a second pin shaft 104; the inner end of the lower left support arm 12 rear part and the inner end of the lower right support arm 12' rear part are mounted in the lower rear hollow cavity 102' by means of a third pin shaft 104; the outer ends of the upper left support arm 11, of the lower left support arm 12 front part, and of the lower left support arm 12 rear part are hingedly connected to the left fixing base; the outer ends of the upper right support arm 11', of the lower right support arm 12' front part, and of the lower right support arm 12' rear part are hingedly connected to the right fixing base; a front shock absorber left connecting member 120 is disposed between the lower left support arm 12 front part and the lower left support arm 12 rear part, and a front shock absorber right connecting member 120' is disposed between the lower right support arm 12' front part and the lower right support arm 12' rear part; the left side of the front shock absorber 13 is connected to the front shock absorber left connecting member 120, and the right side of the front shock absorber 13 is connected to the front shock absorber right connecting member 120'.
- [5] Claim 1 differs from D1 in respect of: the vertical pipe of the steering device and a connection structure of the vertical pipe; a rear fork and a connection mode thereof; and a rear center single shock absorber and a connection structure thereof, a parking locking device, the specific structure of the vehicle frame, limiting blocks and configurations thereof, the inner end of the upper left support arm and the inner end of the upper right support arm being mounted in the upper front hollow cavity by means of a first pin shaft.

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Box No. V

Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability;  
citations and explanations supporting such statement

- [6] Therefore, claim 1 and dependent claims 2-9 are novel in the sense of PCT Article 33(2).
- [7] **2.**Inventive step
- [8] On the basis of the distinguishing technical features above, the technical problem to be essentially solved by claim 1 is: how to achieve a reasonable space of a support structure and high strength.
- [9] The distinguishing technical features above are not common general knowledge in the art, and likewise cannot be derived from the teaching provided by the prior art. Therefore, the subject matter of claim 1 is not obvious, and claim 1 and dependent claims 2-9 involve an inventive step in the sense of PCT Article 33(3).
- [10] **3.** Industrial applicability
- [11] The subject matter of claims 1-9 can be made or used in industry, and therefore, claims 1-9 are industrially applicable in the sense of PCT Article 33(4).

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**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:

- [1] Claim 1 defines the technical feature "the right center inclined rear vertical pipe is connected to the right rear upper horizontal pipe", while the description defines that "the right center inclined rear vertical pipe 42 is connected to the right center upper horizontal pipe 41". Therefore, claim 1 is not supported by the description, and does not comply with PCT Article 6. A reasonable expectation is made: the right center inclined rear vertical pipe is connected to the right center upper horizontal pipe.
- [2] The technical features "the steering device comprises a steering column and a vertical pipe connected to the support frame" and "the lower left support arm front part between is disposed at the lower part of the left limiting block" in claim 1, and the technical feature "the shape of the clamped part is an arc-shaped plate matching with the clamping friction sheets" in claim 6 are unclear. The technical term, the support frame, in claims 1 and 9, and the technical term, the front suspension frame, in claims 4 and 5 are inconsistent with the vehicle frame and the front suspension in claim 1. Therefore, claims 1, 4-6, and 9 are unclear and do not comply with PCT Article 6. The technical features of claim 1 are reasonably expected as: the steering device comprises a steering column and a vertical pipe connected to the vehicle frame and the lower left support arm front part is disposed at the lower part of the left limiting block. The technical feature of claim 6 is reasonably expected as: The shape of the clamped part is an arc-shaped plate matching with the clamping friction sheets. The support frame in claims 1 and 9 should be the vehicle frame and the front suspension frame in claims 4 and 5 should be the front suspension.