

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference 18-1266WO01	Date of mailing <i>(day/month/year)</i> 29 January 2021	
FOR FURTHER ACTION See paragraph 2 below		
International application No. PCT/US2020/055876	International filing date <i>(day/month/year)</i> 16 October 2020	Priority date <i>(day/month/year)</i> 25 October 2019
International Patent Classification (IPC) or both national classification and IPC B60P 1/28(2006.01)i; B62D 33/00(2006.01)i		
Applicant CATERPILLAR INC.		

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/KR Korean Intellectual Property Office 189 Cheongsa-ro, Seo-gu, Daejeon, 35208	Date of completion of this opinion 29 January 2021	Authorized officer BAHNG, Seung Hoon
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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2020/055876

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:
 - 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 13*ter*.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 13*ter*.1(a)).
 - on paper or in the form of an image file (Rule 13*ter*.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:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2020/055876

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>2,7,9</u>	YES
	Claims	<u>1,3-6,8,10</u>	NO
Inventive step (IS)	Claims	<u>NONE</u>	YES
	Claims	<u>1-10</u>	NO
Industrial applicability (IA)	Claims	<u>1-10</u>	YES
	Claims	<u>NONE</u>	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: WO 2019-110019 A1 (INNER MONGOLIA NORTH HAULER JOINT STOCK CO., LTD. et al.) 13 June 2019

D2: CN 202863223 U (SANY ORE MACHINE CO., LTD.) 10 April 2013

I. Novelty and Inventive Step (PCT Article 33(2) and (3))

1. Claims 1-5

1.1. Claim 1

D1 is considered to be the closest prior art and discloses a mining dump truck comprising: a first guide block (6) pivotally coupled to a first installation support frame (5) of a platform (3) of the mining dump truck; and a second guide block (6) pivotally coupled to a second installation support frame (5) of the platform (3), wherein the first and second guide blocks (6) are spaced apart from each other in a width direction of the platform (3) and configured to pivot in the width direction of the platform (3) on the first and second installation support frames (5) about respective pivot axes that extend in a length direction of the platform (3), wherein each of the first and second guide blocks (6) includes the installation support frame (5) having hinge holes, the hinge holes having therethrough a hinge pin (9) to pivotally couple the installation support frame (5) to the first or the second installation support frame (5), and the guide block (6) provided on a top portion of the installation support frame (5), wherein a cushioning liner (7) is removably coupled to the top portion of the guide block (6), and the cushioning liner (7) defines an upward-facing contact surface (72) configured to have seated thereon a down-facing contact surface of a support base (4) provided on a front wall of a truck bed (1) of the mining dump truck (see page 3, line 8 - page 4, line 3 and figures 1-4).

As all the features of claim 1 are disclosed in D1, this claim is not novel.

1.2. Claim 2

The additional feature of claim 2 would be easily derived from the disclosure of D2 (see paragraph [0024] and figures 1-5: a friction plate (5), a car box fixing seat (1), and a frame fixing seat (7) all adopt a bent plate structure, which can play a guiding role when a carriage (10) falls again after being lifted).

Accordingly, claim 2 would have been obvious over D1 in view of D2. Therefore, claim 2 does not involve an inventive step.

1.3. Claims 3-5

The additional feature of claim 3 is disclosed in D1 (see figure 3: the installation support frame (5) limits rotation of the guide block (6) to a predetermined range).

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

The additional features of claims 4-5 are disclosed in D1 (see figure 3: the cushioning liner (7) is removably coupled to the top portion of the guide block (6) by a plurality of bolts (10), wherein an adjustment piece (8) is accommodated between the cushioning liner (7) and the guide block (6)).

Therefore, claims 3-5 are not novel.

2. Claims 6-10

2.1. Claim 6

D1 is considered to be the closest prior art and discloses a guide block (6) configured to be pivotally coupled to an installation support frame (5) of a platform (3), comprising: the installation support frame (5) having hinge holes configured to receive therethrough a hinge pin (9) to pivotally couple the installation support frame (5); and a cushioning liner (7) provided on a top portion of the guide block (6), wherein the cushioning liner (7) is removably coupled to the top portion of the guide block (6), and the cushioning liner (7) defines an upward-facing contact surface (72) configured to have seated thereon a down-facing contact surface of a support base (4) provided on a front wall of a truck bed (1) of the mining dump truck (see page 3, line 8 - page 4, line 3 and figures 1-4).

As all the features of claim 6 are disclosed in D1, this claim is not novel.

2.2. Claim 7

The additional feature of claim 7 would be easily derived from the disclosure of D2 (see paragraph [0024] and figures 1-5: a friction plate (5), a car box fixing seat (1), and a frame fixing seat (7) all adopt a bent plate structure, which can play a guiding role when a carriage (10) falls again after being lifted).

Accordingly, claim 7 would have been obvious over D1 in view of D2. Therefore, claim 7 does not involve an inventive step.

2.3. Claims 8, 10

The additional feature of claim 8 is disclosed in D1 (see figure 3: the installation support frame (5) limits rotation of the guide block (6) to a predetermined range).

The additional feature of claim 10 is disclosed in D1 (see figure 3: the cushioning liner (7) is fixedly coupled to the top portion of the guide block (6) by a plurality of bolts (10)).

Therefore, claims 8, 10 are not novel.

2.4. Claim 9

The additional feature of claim 9 would be easily derived from the disclosure of D1 (see figure 3: the installation support frame (5) limits rotation of the guide block (6) to a predetermined range).

Accordingly, claim 9 would have been obvious over D1. Therefore, claim 9 does not involve an inventive step.

II. Industrial Applicability (PCT Article 33(4))

Claims 1-10 are industrially applicable.