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(71) Applicant: **CLARK EQUIPMENT COMPANY**
[US/US]; 250 East Beaton Drive, West Fargo, ND 58078-6000 (US).

(72) Inventors: **SPEARS, Karl**; 1000 Meadow Run Drive, Bismarck, ND 58504 (US). **KALDOR, Matthew, J.**; 1325 Eagles View Lane, Bismarck, ND 58503 (US). **MUSCHA, Jason**; 4515 Normandy Street, Bismarck, ND 58503 (US). **HANSEN, Cameron, C.**; 3205 East Calgary Avenue #212, Bismarck, ND 58503 (US). **RINGGENBERG, Justin**; 15251 66th Street NE, Bismarck, ND 58521 (US). **HOESEL, Jeret, L.**; 9200 Plainview Drive, Bismarck, ND 58503 (US). **HANSEN, Ronald, S.**; 6045 County Road 23, Leonard, ND 58052 (US).

(74) Agents: **VELDHUIS-KROEZE, John** et al.; Westman, Champlin & Koehler, P.A., 900 Second Avenue South, Suite 1400, Minneapolis, MN 55402-3319 (US).

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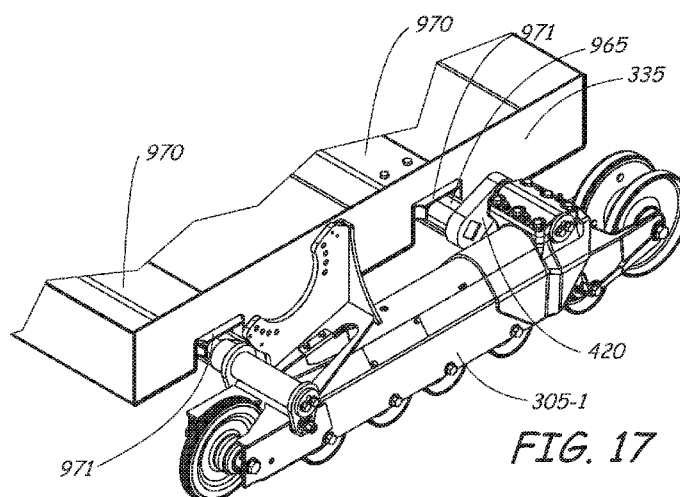
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- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

[Continued on next page]

(54) Title: APPARATUS FOR MOUNTING A TRACK FRAME TO A FRAME OF A POWER MACHINE



(57) Abstract: Disclosed embodiments include power machines (100; 200; 302), track frame assemblies (305), and apparatus for mounting a track frame assembly to a frame of a power machine. In various disclosed embodiments, mounting structures (310; 340; 350) mount a track frame to the machine frame (335). In some exemplary embodiments, each mounting structure includes two torsional joints and at least three non-torsional joints between the machine frame and the corresponding track frame. The two torsional joints can be provided by torsion shafts (405) and the corresponding attachments to front and rear arms (420). In exemplary embodiments, the at least three non-torsional joints are substantially free to rotate and can include a joint between a front axle (435) and the track frame, a joint between a rear axle (435) and a link (500), and a joint between a link pin (520) and the track frame. In some exemplary embodiments, the front or rear arms are oriented relative to corresponding torsion shafts to improve performance.



(88) Date of publication of the international search report:

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2016/030228

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2016/030228

A. CLASSIFICATION OF SUBJECT MATTER
INV. B62D55/108 B62D55/10 B62D55/06
ADD.

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)
B62D

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)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 2009/321152 A1 (ARULRAJA MYLVAGANAM [US] ET AL) 31 December 2009 (2009-12-31) paragraph [0025] paragraph [0032] - paragraph [0040]; figures 1-7	15,21 1-14, 16-20
X A	US 2012/012407 A1 (DANIELS CHRISTOPHER E [US] ET AL) 19 January 2012 (2012-01-19) paragraph [0015] - paragraph [0016] paragraph [0020] - paragraph [0022]; figures 1-6 paragraph [0025]	15,21 1-14, 16-20
A	US 2010/060075 A1 (HANSEN RONALD S [US]) 11 March 2010 (2010-03-11) paragraph [0066]; figures 33,34	1-21
	----- -/-	



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

"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

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Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Burley, James

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2016/030228

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 736 724 C (PORSCHE KG) 25 June 1943 (1943-06-25) page 2, line 4 - line 38; figures 1-3 -----	13

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2016/030228

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		FR 893468 A	28-07-1944

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12, 14

an apparatus for mounting a track frame to a power machine and more specifically where a front arm of the front mounting structure is oriented to extend forward and upward from a front torsion shaft, and the rear mounting structure further comprises a link coupled to the rear axle and a pin coupled between the link and the corresponding first or second track frame

2. claim: 13

an apparatus for mounting a track frame to a power machine and more specifically where the mounting structures comprise two biased joints and at least three unbiased joints

3. claims: 15-21

an apparatus for mounting a track frame to a power machine and more specifically the connection of the mounting structure to the frame of the power machine
