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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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12/433,672

04/30/2009

Werner Hoffmann

BUNGA-017US

9564

7663

7590

09/01/2011

STETINA BRUNDA GARRED & BRUCKER
75 ENTERPRISE, SUITE 250
ALISO VIEJO, CA 92656

EXAMINER

SCHARICH, MARC A

ART UNIT

PAPER NUMBER

3611

MAIL DATE

DELIVERY MODE

09/01/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 12/433,672	Applicant(s) HOFFMANN ET AL.	
	Examiner MARC SCHARICH	Art Unit 3611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/30/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/14/2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/12/2009</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on application 10 2008 002 844.4 filed in Germany on May 6, 2008 and application 10 2008 057 272.1 filed in Germany on November 13, 2008. It is noted, however, that applicant *has not filed a certified copy* of the foreign German applications as required by 35 U.S.C. 119(b). Certified copies of the aforementioned foreign applications must be filed to obtain the claimed foreign priority.

Specification

2. The abstract of the disclosure is *objected to* because of the following matters: The abstract is composed of 3 separate paragraphs. The abstract should be a single paragraph (*no more than 150 words in length*) and should recite clear, concise language (*see line 3, for example, "the secondary drive train output" language is unclear*).

Additionally, the disclosure is *objected to* because of the following matters:

(Page 2, 4th Line): "engages" should be -- engaged --

(Page 7, Para [0028]): In the brief description for Figure 9b, it is recited "*according to Figure 9b*", which appears to be incorrect.

(Page 10, 8th and 9th Lines): "connecting shaft 14" should be -- connecting shaft 15 --

(Page 10, 13th Line): "spur gear shaft 14" should be -- spur gear step 14 --

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(Page 12, Para [0053]): in order to resolve several informalities, the examiner *suggests* amending Para [0053] as follows:

-- [0053] With the side shaft couplings 4 power loss can also be saved by the friction plates of the side shaft couplings 4 being configured differently, depending on whether they are outer plates 6 8 or inner plates 5 7. The inner plates 5 7, therefore the friction plates, which, as previously described, are preferably connected torque-proof to the side shafts 12 of the secondary axle 2 and accordingly revolve permanently, can be configured as blank steel discs with a relatively low- friction surface. ~~If~~ if these rotate during travel with constant contact with cooling and lubricating oil, they cause only minor friction losses. But the outer plates 6 8, which are preferably idle anyway when the secondary axle drive train is disconnected, can present the actual friction lining and channeling delivering lubricating and cooling oil arranged herein or separately. --

Drawings

3. The drawings are *objected to* as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: “30” in Fig. 11 and “39” in Figs. 15 and 16.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being

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amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. **Claims 1 and 6** are *objected to* because of the following informalities:

Claim 1

(Line 6): "in side shafts" should be -- ~~in~~ on side shafts --

(Line 12): "the secondary drive wheels" should be -- the ~~secondary~~ drive wheels of the secondary axle --

Claim 6

(Line 3): "power transmission gear" should be -- power transmission gearbox --

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being *indefinite for failing to particularly point out and distinctly claim the subject matter* which applicant regards as the invention. **The examiner notes that there are *several***

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instances of indefinite claim language throughout the claims, which (like the entire present application) appears to be a crudely translated foreign document.

More specifically:

Claim 1

(Lines 3-4): it is recited “*via which the secondary drive train can be integrated in the drive train transferring the overall drive output*”. There is insufficient antecedent basis in the claim for “the secondary drive train” and “the overall drive output”. Furthermore, it is unclear what “drive train” is being referenced in line 4.

(Line 5): “*the secondary drive train output*” limitation lacks sufficient antecedent basis.

(Line 7): It is unclear what “*comprising*” is referring to. Lines 1-7 recite several structural and functional elements.

(Line 8): it is recited “*a switch-on mechanism*”, however, the limitation is already established in line 3, the additional recitation therefore being ambiguous.

(Line 10): “*the section*” limitation lacks sufficient antecedent basis.

(Lines 9-12): it is recited: “*and when the secondary axle is connected the section of the secondary drive train located between the switch-on device and the side shaft couplings is uncoupled both from the primary drive train, in particular from the primary axle, and from the secondary drive wheels.*” Such a recitation is *structurally indefinite*. How is it physically possible that if the secondary axle is connected, the secondary drive train is essentially uncoupled? The written description and drawings disclose the *complete opposite*, that is, when the secondary axle is connected (*to the wheels connected thereto via the side shaft couplings*) the section of the secondary drive train located

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between the switch-on device (3) and the side shaft couplings (14) is coupled for rotation (see Fig. 5).

Claim 2

(Lines 1-4): it is recited "*wherein the secondary axle is connected the side shaft couplings form drive output distribution without differential between the drive wheels of the secondary axle guaranteeing transverse equalization similar to transverse differential*" which is ambiguous, indefinite language.

Claim 3

(Lines 2-4): it is recited "*wherein the secondary axle is connected the side shaft couplings forms a drive output distribution without differential between the primary axle and the secondary axle, guaranteeing longitudinal equalization similar to longitudinal differential*" which is ambiguous, indefinite language.

Claim 5

(Lines 2-3): it is recited "*and the secondary drive train output is felt by the switch-on mechanism*" which is ambiguous, indefinite language.

Claim 6

(Line 2): "*the speed synchronization*" limitation lacks sufficient antecedent basis.

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(Line 3): it is recited “*power transmission gear is undertaken or at least supported*” which is ambiguous, indefinite language.

(Lines 3-4): “*the tight fit*” limitation lacks sufficient antecedent basis.

Claim 7

(Line 3): “*the friction plates*” limitation lacks sufficient antecedent basis.

(Line 4): it is recited “*cooperate torque proof as inner plates*” which is ambiguous, indefinite language.

(Lines 4-5): “*the vehicle drive-side friction plates*” limitation lacks sufficient antecedent basis.

Claim 11

(Lines 2-3): “*the drive power*” limitation lacks sufficient antecedent basis.

Claim 12

(Line 2): “*the axle drive unit*” limitation lacks sufficient antecedent basis.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

As best understood, claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Porter, U.S. Patent Application Publication No. 2002/0144851.

Porter discloses a drive train (10) of a vehicle (Figs. 1-7) comprising *at least*: a primary axle [*formed by at least half-shafts*] (24) permanently driven via a primary drive train (14) and a secondary drive train (16) having a secondary axle [*formed by at least axle shafts*] (30) operably connectable to the primary drive train (14) and primary axle (24) via a switch-on device [*power takeoff unit (PTU)*] (26), thus the secondary drive train (16) can be integrated with the primary drive train (14) via the switch-on device (26), and whereby when the secondary axle (30) is connected [*via at least an overall drive axle assembly*] (34) (Fig. 2), drive output to the secondary drive train (16) is conveyed to side shaft couplings [*couplings within housing (40)*], on side shafts (58, 60) of the secondary axle (30), and is transmitted to drive wheels (32) of the secondary axle (30), wherein the side shaft couplings have at least one frictionally engaged coupling and when the secondary axle (30) is connected, a propeller shaft section (28) of the secondary drive train (16) located between the switch-on device (26) and the side shaft couplings is operably coupled to the primary axle (24) and to the secondary axle (30) to transfer the drive output; wherein the primary axle (24) is operably connected to a transmission gearbox [*transaxle*] (20); and wherein the frictionally engaged couplings operably connected to the side shaft couplings are formed by frictionally engaged multiple disc clutch packs (114, 250), and may be supplied oil for cooling from an oil sump [*via a pump, and chamber*] (Figs. 2 and 7), and when the multiple disc clutch packs (114, 250) are frictionally engaged, along with the switch-on device (26), the

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primary drive train (14) and secondary drive train (16) may both simultaneously transfer the drive output to both front and rear drive wheels (22, 32) of the primary and secondary axles (24, 30), respectively.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: the prior art cited on form PTO-892 generally relates to vehicle drive train systems for connecting and disconnecting (engaging and disengaging) a four-wheel drive mode of the vehicle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC SCHARICH whose telephone number is (571) 272-3244. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on (571) 272-6651. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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M.A.S. – 8/24/2011

/Marc A Scharich/
Patent Examiner
Art Unit 3611

/Tony H. Winner/
Primary Examiner, Art Unit 3611
August 27, 2011

Notice of References Cited	Application/Control No. 12/433,672		Applicant(s)/Patent Under Reexamination HOFFMANN ET AL.	
	Examiner MARC SCHARICH		Art Unit 3611	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2002/0144851	10-2002	Porter, Fred C.	180/247
*	B	US-6,296,590	10-2001	Gassmann, Theodore	475/231
*	C	US-6,837,817	01-2005	Mori et al.	475/142
*	D	US-7,111,716	09-2006	Ekonen et al.	192/20
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
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	S					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.




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BIB DATA SHEET

CONFIRMATION NO. 9564

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
12/433,672	04/30/2009	180	3611	BUNGA-017US		
RULE						
APPLICANTS Werner Hoffmann, Siegburg, GERMANY; Hans-Peter Nett, Adenau, GERMANY; Michael Hoeck, Neunkirchen-Seelscheid, GERMANY; Jan Potulski, Cologne, GERMANY; Matthias Adelt, Bochum, GERMANY;						
** CONTINUING DATA ***** ** FOREIGN APPLICATIONS ***** GERMANY 10 2008 002 844.4 05/06/2008 GERMANY 10 2008 057 272.1 11/13/2008 ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 05/13/2009						
Foreign Priority claimed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and Acknowledged <u>/MARC A SCHARICH/</u> Examiner's Signature		<input type="checkbox"/> Met after Allowance Initials	STATE OR COUNTRY GERMANY	SHEETS DRAWINGS 11	TOTAL CLAIMS 12	INDEPENDENT CLAIMS 1
ADDRESS STETINA BRUNDA GARRED & BRUCKER 75 ENTERPRISE, SUITE 250 ALISO VIEJO, CA 92656 UNITED STATES						
TITLE DRIVE TRAIN FOR A VEHICLE WITH CONNECTABLE SECONDARY AXLE						
FILING FEE RECEIVED 1090	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		


Search Notes 	Application/Control No. 12433672	Applicant(s)/Patent Under Reexamination HOFFMANN ET AL.
	Examiner MARC SCHARICH	Art Unit 3611

SEARCHED			
Class	Subclass	Date	Examiner
180	233	8/22/2011	M.A.S.
180	244	8/22/2011	M.A.S.
180	245	8/22/2011	M.A.S.
180	247	8/22/2011	M.A.S.
180	248	8/22/2011	M.A.S.
180	249	8/22/2011	M.A.S.
180	250	8/22/2011	M.A.S.

SEARCH NOTES		
Search Notes	Date	Examiner

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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<i>Index of Claims</i> 	Application/Control No. 12433672	Applicant(s)/Patent Under Reexamination HOFFMANN ET AL.
	Examiner MARC SCHARICH	Art Unit 3611

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant		<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47			
CLAIM		DATE							
Final	Original	08/22/2011							
	1	✓							
	2	✓							
	3	✓							
	4	✓							
	5	✓							
	6	✓							
	7	✓							
	8	✓							
	9	✓							
	10	✓							
	11	✓							
	12	✓							

Receipt date: 10/12/2009

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

12433672 - GAI: 3611

Approved for use through 07/31/2012. OMB 0651-0031

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12433672	
	Filing Date		2009-04-30	
	First Named Inventor	Werner Hoffman		
	Art Unit	3655 3611		
	Examiner Name	Unknown Marc A Scharich		
	Attorney Docket Number	BUNGA-017US		

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/MS/	1	20060163018		2006-07-27	Ekonen, et al.		
/MS/	2	20040106487		2004-06-03	Mori, et al.		

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/MS/	1	DE102004015304	DE		2004-10-21	Teraoka		<input type="checkbox"/>
/MS/	2	DE19800328	DE		1998-07-23	Kuroda, et al.		<input type="checkbox"/>

Receipt date: 10/12/2009 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12433672	12433672 - GAU: 3611
	Filing Date		2009-04-30	
	First Named Inventor	Werner Hoffman		
	Art Unit	3655 3611		
	Examiner Name	Unknown Marc A Scharich		
	Attorney Docket Number	BUNGA-017US		

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Examiner Signature	/Marc Scharich/		Date Considered	08/22/2011
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>				
<p>¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.</p>				