

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	14738060
	Filing Date	2015-06-12
	First Named Inventor	Mark J. Sarder et al.
	Art Unit	3747
	Examiner Name	Kevin A. Lathers
	Attorney Docket Number	CET1090.019

2	20040139943	A1	2004-07-22	Kern et al.
3	20100258099	A1	2010-10-14	Andersson et al.
4	20110253102	A1	2011-10-20	Watanabe
5	20140238340	A1	2014-08-28	Dunn et al.
6	20140373531	A1	2014-12-25	Wong
7	20150122230	A1	2015-05-07	Sarder et al.

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That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).			
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That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).			
☐ See attached certification statement.			
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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.			
Signature	/Kevin R. Rosin/	Date (YYYY-MM-DD)	2018-05-15
Name/Print	Kevin R. Rosin	Registration Number	55584
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Electronic Patent Application Fee Transmittal				
Application Number:		14738060		
Filing Date:		12-Jun-2015		
Title of Invention:		DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE		
First Named Inventor/Applicant Name:		Mark J. Sarder		
Filer:		Kevin Roger Rosin./Robyn Templin		
Attorney Docket Number:		CET1090.019		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	120	120
Total in USD (\$)				120

Electronic Acknowledgement Receipt	
EFS ID:	32623422
Application Number:	14738060
International Application Number:	
Confirmation Number:	9670
Title of Invention:	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE
First Named Inventor/Applicant Name:	Mark J. Sarder
Customer Number:	26629
Filer:	Kevin Roger Rosin./Robyn Templin
Filer Authorized By:	Kevin Roger Rosin.
Attorney Docket Number:	CET1090.019
Receipt Date:	15-MAY-2018
Filing Date:	12-JUN-2015
Time Stamp:	10:07:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 120
RAM confirmation Number	051518INTEFSW10100400
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1		Response.pdf	192042	yes	16
			d6db05d9301bc94c09ad66a0a688b799823cd365		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
	Claims		2	7	
	Applicant Arguments/Remarks Made in an Amendment		8	16	
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	SupplDS.pdf	1035121	no	6
			69a944958f5680dc62a534631bedd830ce66a24b		
Warnings:					
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3	Fee Worksheet (SB06)	fee-info.pdf	30716	no	2
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 14/738,060		Filing Date 06/12/2015		☐ To be Mailed	
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO									
APPLICATION AS FILED – PART I									
(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)	
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A		N/A		N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A			
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL			
APPLICATION AS AMENDED – PART II									
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	05/15/2018	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 26	Minus	** 26	= 0	x \$50 =		0	
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	x \$230 =		0	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE		0	
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =			
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/738,060	06/12/2015	Mark J. Sarder	CET1090.019	9670
26629 7590 02/22/2018 ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (ZPS) 136 S WISCONSIN ST PORT WASHINGTON, WI 53074			EXAMINER LATHERS, KEVIN ANTHONY	
			ART UNIT 3747	PAPER NUMBER
			NOTIFICATION DATE 02/22/2018	DELIVERY MODE ELECTRONIC

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DETAILED ACTION

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Claim Interpretation

The following is a quotation of 35 U.S.C. 112(f):

(f) Element in Claim for a Combination. – An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

The following is a quotation of pre-AIA 35 U.S.C. 112, sixth paragraph:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

1. This application includes one or more claim limitations that do not use the word "means," but are nonetheless being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, because the claim limitation(s) uses a generic placeholder that is coupled with functional language without reciting sufficient structure to perform the recited function and the generic placeholder is not preceded by a structural modifier. Such claim limitation(s) is/are: "regulator mounting device" in claims 15-17. A "device" is a generic term for any structure, therefore this limitation amounts to "a means for mounting a regulator."

Because this/these claim limitation(s) is/are being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, it/they is/are being interpreted to

cover the corresponding structure described in the specification as performing the claimed function, and equivalents thereof.

If applicant does not intend to have this/these limitation(s) interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, applicant may: (1) amend the claim limitation(s) to avoid it/them being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph (e.g., by reciting sufficient structure to perform the claimed function); or (2) present a sufficient showing that the claim limitation(s) recite(s) sufficient structure to perform the claimed function so as to avoid it/them being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph.

Claim Rejections - 35 USC § 102

2. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention.

3. **Claim(s) 1 and 7 is/are rejected under 35 U.S.C. 102(a)(1) as being clearly anticipated by Sugimoto (US 2007/0137591).**

4. **Regarding claim 1**, Champion discloses mechanical fuel lockout switch (Fig. 1, shown switch system) for a dual fuel engine (Fig. 1, shown engine 30) comprising:

a mechanical fuel valve 12 actuatable between a first position and a second position to selectively control fuel flow to the dual fuel engine from a first fuel source 61 through a first fuel line A1 and a second fuel source 71 through a second fuel line A5 (Fig. 1, shown lines and valve); and

a fuel lockout apparatus 63 (a fuel cutoff is coupled via the regulator 62 to the valve 12) coupled to the mechanical fuel valve;

wherein the mechanical fuel lockout switch:

communicates the first fuel source to the dual fuel engine and prevents communication between the second fuel source and the dual fuel engine when the mechanical fuel valve is in the first position, and communicates the second fuel source to the dual fuel engine and interrupts the first fuel source communication with the dual fuel engine when in the second position (Para. [0082], the switch has multiple positions which allow valve 12 connect either of the lines A1 or A4 to line A2 and also activate lockout apparatus 63).

5. **Regarding claim 7**, the mechanical fuel lockout switch for a dual fuel engine of claim 1, wherein the mechanical fuel valve and the fuel lockout apparatus operate together to ensure that fuel from the first fuel source and fuel from the second fuel source are not simultaneously delivered to the dual fuel engine (Para. [0082], the system does not allow two fuels to be delivered simultaneously).

6. **Claim(s) 1, 7, 8, 19, 22, and 26 is/are rejected under 35 U.S.C. 102(a)(1) as being clearly anticipated by Pursifull et al (US 2011/0168133)**

7. **Regarding claims 1 and 19**, Pursifull discloses a mechanical fuel lockout switch for a dual fuel engine (Fig. 3, shown dual fuel engine with lockout switch) and method of constructing it comprising: a mechanical fuel valve 120 actuateable between a first position and a second position to selectively control fuel flow to the dual fuel engine 102 from a first fuel source 112 through a first fuel line 119 and a second fuel source 134 through a second fuel line 140 (Para. [0025], the valve 120 is a three-way mechanical selection valve); and
8. a fuel lockout apparatus (Controller 128, pumps 136 114, and solenoid valves 118 126) coupled to the mechanical fuel valve (Fig. 1, the lockout apparatus is coupled to the valve 120 via controller 128 and fuel lines 119/140);
9. wherein the mechanical fuel lockout switch: communicates the first fuel source to the dual fuel engine and prevents communication between the second fuel source and the dual fuel engine when the mechanical fuel valve is in the first position, and communicates the second fuel source to the dual fuel engine and interrupts the first fuel source communication with the dual fuel engine when in the second position (Para. [0025], [0028], and [0066], the three-way valve and lockout apparatus determine connection of the first or second fuel to the dual fuel engine 102).
10. The apparatus above having all the parts coupled together and therefore being "coupled" and "provided" as per the method in claim 19.
11. **Regarding claim 7**, Pursifull discloses the mechanical fuel lockout switch for a dual fuel engine of claim 1, wherein the mechanical fuel valve and the fuel lockout apparatus operate together to ensure that fuel from the first fuel source and fuel from

the second fuel source are not simultaneously delivered to the dual fuel engine (Para. [0025], [0028], and [0066], the lockout apparatus cuts off the fuel supply between the lines).

12. **Regarding claims 8 and 26**, Pursifull discloses the mechanical fuel lockout switch for a dual fuel engine of claims 7 and 19, wherein the first fuel source provides gasoline as liquid fuel from a liquid fuel tank to the dual fuel engine and the second fuel source provides LPG fuel from a pressurized fuel container to the dual fuel engine (Para. [0040], the multi fuel system may be liquid propane (gaseous fuel) and gasoline (liquid fuel)).

13. **Regarding claim 22**, the modified Pursifull discloses the method of claim 19 as disclosed above, wherein the fuel lockout apparatus comprises a fuel inlet cover configured to actuate in unison with the mechanical fuel valve to cover a fuel inlet on the internal combustion engine for the second fuel source when the mechanical fuel valve is in the first position and uncover the fuel inlet when the mechanical fuel valve is in the second position (Para. [0025], [0028], and [0066], the lockout apparatus cuts off the fuel supply between the lines, by considering the line which connects to the lockout valve as a "fuel inlet" then the valve cutting off flow is then covering the inlet to disallow fuel flow).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have

been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 9, 14-18, and 23-25 is/are rejected under 35 U.S.C. 103 as being unpatentable over Pursifull et al (US 2011/0168133) in view of Sugimoto et al (US 2007/0137591).

16. Regarding claim 9, Pursifull discloses a dual fuel engine and fuel delivery system comprising:

a dual fuel engine (Fig. 1, shown) configured to operate on a liquid fuel supplied from a liquid fuel source through a liquid fuel line and a gaseous fuel supplied from a pressurized fuel source through a gaseous fuel line (Para. [0040], the multi fuel system may be pressurized liquid propane (gaseous fuel) and gasoline (liquid fuel)); and a mechanical fuel valve actuateable between a first position and a second position to selectively control fuel flow to the dual fuel generator from the liquid fuel source through the liquid fuel line and the pressurized fuel source through the gaseous fuel line (Para. [0025], [0028], and [0066], the three-way valve and lockout apparatus determine connection of the first or second fuel to the dual fuel engine 102).

17. Pursifull fails to disclose a fuel regulator system located off board the dual fuel engine, the fuel regulator system comprising: a primary pressure regulator coupled to a service valve of the pressurized fuel source and configured to regulate the fuel supplied from the pressurized fuel source to a reduced pressure; and a secondary pressure regulator coupled to the primary pressure regulator and configured to regulate the gaseous fuel supplied from the primary pressure regulator to a desired pressure for delivery through the gaseous fuel line to operate the dual fuel generator.

18. Sugimoto discloses a dual fuel engine and delivery system (Fig. 1, as shown) wherein the system includes an off-board gaseous fuel system (Fb) which includes an off-board pressure regulator 72 which feeds fuel into an engine system 1 which includes another pressure regulator 62. The inclusion of pressure reduction devices for the gasification of liquid-held fuel allows for an effective cooling of the fuel system and systems (Para. [0010]) while allowing the dual fuel engine to be powered by an external fuel tank attached to it in an off board fashion such as in emergency situations (Para. [0002]).

19. Therefore, it would have been obvious to one of ordinary skill in the art before the filing date of the invention to modify the device of Pursifull with the pressure regulators and gaseous fuel system methods of Sugimoto in order to improve the cooling of the fuel system parts through pressure reduction as well as regulate the pressure from an external attached fuel tank which allows the dual fuel engine system to be used in varying situations such as emergency ones using an external fuel source.

20. **Regarding claim 14**, the modified Pursifull discloses the dual fuel generator and fuel delivery system of claim 9, further comprising: a first end of a quick-connect hose coupling coupled to an outlet of the secondary pressure regulator; and a second end of the quick-connect hose coupling coupled to an inlet of the gaseous fuel line to mate with the first end of the quick-connect hose coupling to couple the secondary pressure regulator to the gaseous fuel line (Fig. 1 of Sugimoto shows that the modification of Pursifull to include an external source of gaseous fuel and regulators makes use of a connection hose coupling 14).

21. **Regarding claims 15**, the modified Pursifull discloses the dual fuel generator and fuel delivery system of claim 9, further comprising a regulator mounting device (a bracket as per applicant's disclosure on in Para. [0024] of the disclosure) secured to the pressurized fuel source with at least the secondary pressure regulator mounted on the regulator mounting device (Fig. 1 of Sugimoto which discloses the regulator systems, the regulator 72 shown is attached to the fuel tank system 71).

22. The modified Pursifull fails to specifically note a bracket being used for the fixation of the regulator 72. However, it would have been obvious to one of ordinary skill in the art before the filing date of the invention to attach the regulator 72 using some device wherein a bracket is an extremely old and well-known fixation device and one of ordinary skill in the art would have known to apply a known device and technique of mounting a regulator on a fuel tank, such as a bracket, to yield the predictable results of fixing the regulator to its fuel system.

23. **Regarding claim 16**, the modified Pursifull discloses the dual fuel generator and fuel delivery system of claim 15, but fails to disclose wherein the primary pressure regulator is mounted on the regulator mounting device. The modified Pursifull fails to disclose the two regulators being located in positions where they would be mounted making use of the same mounting bracket.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount both regulators in a similar location on the same bracket since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

24. **Regarding claim 17**, the modified Pursifull discloses the dual fuel generator and fuel delivery system of claim 16, but fails to disclose wherein the pressurized fuel source comprises a pressurized fuel container having a collar; and wherein the regulator mounting device secures to the collar so that the primary and secondary pressure regulators are positioned adjacent each other along an outer periphery of the collar.

25. In this case the claim pertains to the routine and known art of using propane tanks as a fuel tank source as these devices are well-known in the art to have a “collar” piece which often has regulators attached to it. While the art of Pursifull and Sugimoto never make reference to this specific old and well-known device, they do make use of fuel tanks that could easily be substituted with them. Therefore, examiner makes official notice that it is old and well-known to make use of standard-in-the-art propane tanks with regulators attached to their collars as this would have allowed the modified Pursifull to make use of the common, cheap, and easy-to-use propane tanks for its regulation and propane tank systems. Some examples of such tanks can be seen at: RVDoctor (Oct. 2010, <http://www.rvdoctor.com/2012/10/disconcerting-propane-leaks-on-rv.html>) which shows two propane tanks with a regulator attached to their collar; and Nooutage.com (Aug. 27th, 2006, https://web.archive.org/web/20060928183104/http://www.nooutage.com:80/images/BS-7KW_Power_Now_tanks.jpg) which shows propane tanks with regulators attached to their collars.

26. **Regarding claim 18**, the modified Pursifull discloses the dual fuel generator and fuel delivery system of claim 9, but fails to disclose wherein the primary and secondary pressure regulators are integral components of a dual stage pressure regulator.

27. However, It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the regulators into a two-stage regulator, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

28. Claims 23-25 are rejected using Pursifull as modified by Sugimoto in the same manner as applied to claim 9 and its dependent claims above.

29. **Regarding claim 23**, the modified Pursifull discloses the method of claim 19, further comprising coupling a fuel regulator system to the second fuel source to reduce fuel pressure therefrom and deliver fuel to the second fuel line at a pressure required for operation of the internal combustion engine (Fig. 1 of Sugimoto shows the regulators in series reducing pressure).

30. **Regarding claim 24**, the modified Pursifull discloses the method of claim 23, further comprising mounting the fuel regulator system to the second fuel source located off-board the internal combustion engine (Fig. 1 of Sugimoto as modified onto Pursifull and shown).

31. **Regarding claim 25**, the modified Pursifull discloses the method of claim 23, further comprising: coupling one end of a quick-disconnect hose coupling to an inlet on the internal combustion engine for the second fuel source; and coupling a mating end of

the quick-disconnect hose coupling to an outlet of the fuel regulator system (Fig. 1 of Sugimoto as modified onto Pursifull and shown).

Allowable Subject Matter

32. Claims 2-6, 10-13, 20, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

33. The following is a statement of reasons for the indication of allowable subject matter: The closest prior art fails to disclose or make obvious the lockout apparatus prevents actuation of the mechanical fuel valve between its two positions and therefore prevents communication of the fuel source with their respective lines and the engine. Further, the closest prior art fails to disclose or make obvious the fuel lockout apparatus preventing the second fuel source from coupling to the second fuel line, wherein this means that not only are the two not in fluid communication but they are not physically connected in any manner.

34. Champion discloses a dual fuel system as discussed above, but its lockout switch does not prevent the hose of the propane tank from even coupling to the engine fuel system lines.

Response to Arguments

35. Applicant's arguments with respect to claims 1-26 have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN A. LATHERS whose telephone number is (571)272-1050. The examiner can normally be reached on 10:00 am-7:00 pm EST, Monday to Thursday.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lindsay Low can be reached on 571-272-1196. 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 USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/KEVIN A LATHERS/
Primary Examiner, Art Unit 3747

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	Examiner KEVIN A. LATHERS		Art Unit 3747	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2007/0137591 A1	06-2007	Sugimoto; Yasuhiro	F02B43/00	123/41.7
*	B	US-2011/0168133 A1	07-2011	Pursifull; Ross Dykstra	F02M37/0064	123/495
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
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*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.

U.S. Patent and Trademark Office
PTO-892 (Rev. 01-2001)

Notice of References Cited

Part of Paper No. 20180212

Search Notes 	Application/Control No. 14738060	Applicant(s)/Patent Under Reexamination SARDER ET AL.
	Examiner KEVIN A LATHERS	Art Unit 3747

CPC- SEARCHED		
Symbol	Date	Examiner
F02D19/0613, 16/0605, 19/0647	07/28/2017	/K.L./
Y02T10/36	07/28/2017	/K.L./

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

SEARCH NOTES		
Search Notes	Date	Examiner
EAST including inventor and assignee search.	07/28/2017	/K.L./
Google key word search (e.g. "dual fuel generator").	07/28/2017	/K.L./
EAST and google search.	02/15/2018	/K.L./

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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<i>Index of Claims</i> 	Application/Control No. 14738060	Applicant(s)/Patent Under Reexamination SARDER ET AL.
	Examiner KEVIN A LATHERS	Art Unit 3747

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

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47									
CLAIM		DATE							
Final	Original	07/28/2017	02/15/2018						
	1	✓	✓						
	2	✓	O						
	3	✓	O						
	4	O	O						
	5	O	O						
	6	O	O						
	7	✓	✓						
	8	✓	✓						
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	24	✓	✓						
	25	✓	✓						
	26	✓	✓						

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	445	F02D19/0613.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:25
S2	1204	F02D19/0605.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:25
S3	3408	F02D19/0647.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:25
S4	15258	Y02T10/36.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:25
S5	808	(S1 S2 S3 S4) and (switch valve) near20 (propane natural adj gas gaseous lng cng) near20 (gasoline liquid diesel)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:28
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S7	64	(S1 S2 S3 S4) and (switch valve) near20 (propane natural adj gas gaseous lng cng) near20 (gasoline liquid diesel) and (second secondary auxiliary) adj (regulat\$3 pressure)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:44
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S10	421	(duel dual) near5 fuel near20 (engine generator) same (switch valve) near20 between	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:46
S11	0	dual adj fuel near20 engine same "switchover valve"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 15:17
S12	44	dual adj fuel near20 engine same (switch switchover) near5 valve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 15:19
S13	49	"6591817"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 15:19
S14	63	("3799125" "4150645" "4265208" "4303049" "4305350" "4323046" "4353345" "4391251" "4398517" "4524033" "4671243" "5450832" "5524582" "5623907" "5720266" "5816224" "6035837").PN. OR ("6591817").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:20
S15	80	dual adj fuel near20 engine same (switch switchover select\$3) near5 valve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 15:21

S16	30	((("SARDER") near3 ("Mark"))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:25
S17	28	((("SOTIRIADES") near3 ("Aleko"))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:25
S18	41	((("DEHN") near3 ("James"))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:25
S19	15	((("JENISON") near3 ("Leigh"))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:25
S20	16	((("CHAMPION") near3 ("ENGINE") near3 ("TECHNOLOGY") near3 ("LLC"))).AANM.	USPAT	OR	OFF	2017/07/27 15:25
S21	19	((("CHAMPION") near3 ("ENGINE") near3 ("TECHNOLOGY") near3 ("LLC"))).as.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:26
S22	5	("20040240141" "20060169238" "20130098349" "20130122439" "4489699").PN. OR ("9435273").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:42
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S24	97	(dual multi multiple plural plurality) adj fuel near20 engine same (switch switchover changeover change switch\$3) near5 (valve switch)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 16:02
S25	1	(09/813622).APP.	USPAT; USOCR	OR	OFF	2017/07/27 16:03
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S29	0	(14/156204).APP.	USPAT; USOCR	OR	OFF	2017/07/28 11:33
S30	5	(gas gasoline liquid near5 fuel) near20 (propane natural adj gas) near20 (fill\$3 fueling) same (quick-connect connect\$3) near20 (cover flange)	USPAT; USOCR	OR	OFF	2017/07/28 11:47
S31	109	(gas gasoline liquid near5 fuel) near20 (propane natural adj gas) near20 (fill\$3 fueling) same (quick-connect connect\$3) near20 (cover flange)	US-PGPUB; USPAT; USOCR; FPRS;	OR	OFF	2017/07/28 11:47

			EPO; JPO; DERWENT; IBM_TDB			
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S33	171	(gas gasoline liquid near5 fuel) near20 (propane natural adj gas) near20 (fill\$3 fueling) same (cover flange) not S31	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/28 11:48
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S35	1	"20070137591"	USPAT	OR	OFF	2018/02/12 15:56
S37	34	(champion near3 engine).as.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/02/12 15:59
S38	95	dual adj fuel near20 valve near10 switch	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/02/12 16:19
S39	48	"4489699"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/02/12 16:30
S40	5	"20070137591"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/02/12 16:30
S41	29	"3412258"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/02/12 16:30

S42	3	"20100258099"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/02/12 16:30
S43	53	"5611312"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/02/12 16:30
S44	138	(S39 S40 S41 S42 S43)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/02/12 16:31
S45	1	(10/591304).APP.	USPAT; USOCR	OR	OFF	2018/02/12 16:45
S46	6	("6332433" "7146962").PN. OR ("7325519").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/02/12 16:46
S47	35	(US-20020014077-\$ or US-20030168024-\$ or US-20110168133-\$ or US-20120204835-\$ or US-20030010320-\$ or US-20160363099-\$ or US-20170037796-\$ or US-20020134362-\$ or US-20140202430-\$ or US-20160221518-\$ or US-20070137591-\$).did. or (US-5320078-\$ or US-5450832-\$ or US-5816224-\$ or US-6591817-\$ or US-5524582-\$ or US-4570605-\$ or US-4712516-\$ or US-9435273-\$ or US-4489699-\$ or US-4305350-\$ or US-4353345-\$ or US-6035837-\$ or US-6904873-\$ or US-7045916-\$ or US-5092305-\$).did. or (US-2558884-\$ or US-2470747-\$ or US-3022425-\$ or US-3451424-\$).did. or (JP-2004278332-\$).did. or (US-20080290531-\$ or US-20130047964-\$ or US-4463735-\$ or CN-203796423-\$).did.	US-PGPUB; USPAT; USOCR; JPO; DERWENT	OR	OFF	2018/02/12 17:19
S48	35	(US-20020014077-\$ or US-20030168024-\$ or US-20110168133-\$ or US-20120204835-\$ or US-20030010320-\$ or US-20160363099-\$ or US-20170037796-\$ or US-20020134362-\$ or US-20140202430-\$ or US-20160221518-\$ or US-20070137591-\$).did. or (US-5320078-\$ or US-5450832-\$ or US-5816224-\$ or US-6591817-\$ or US-5524582-\$ or US-4570605-\$ or US-4712516-\$ or US-9435273-\$ or US-4489699-\$ or US-4305350-\$ or US-4353345-\$ or US-6035837-\$ or US-6904873-\$ or US-7045916-\$ or US-5092305-\$).did. or (US-2558884-\$ or US-2470747-\$ or US-3022425-\$ or US-3451424-\$).did. or (JP-2004278332-\$).did. or (US-20080290531-	US-PGPUB; USPAT; USOCR; JPO; DERWENT	OR	OFF	2018/02/13 17:40

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		\$ or US-20130047964-\$ or US-4463735-\$ or CN-203796423-\$).did.				
S50	17	S48 and regulator	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/02/13 17:40

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	14738060
	Filing Date	2015-06-12
	First Named Inventor	Mark J. Sarder et al.
	Art Unit	3747
	Examiner Name	Kevin A. Lathers
	Attorney Docket Number	CET1090.019

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	Filing Date		2015-06-12
	First Named Inventor	Mark J. Sarder et al.	
	Art Unit	3747	
	Examiner Name	Kevin A. Lathers	
	Attorney Docket Number	CET1090.019	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	14738060
	Filing Date	2015-06-12
	First Named Inventor	Mark J. Sarder et al.
	Art Unit	3747
	Examiner Name	Kevin A. Lathers
	Attorney Docket Number	CET1090.019

CERTIFICATION STATEMENT			
Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):			
☒	That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).		
OR			
☐	That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).		
See attached certification statement.			
The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.			
A certification statement is not submitted herewith.			
SIGNATURE			
A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.			
Signature	/Stephanie M. Laundre/	Date (YYYY-MM-DD)	2018-02-22
Name/Print	Stephanie M. Laundre	Registration Number	65124
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.			

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**Espacenet****Bibliographic data: CN2060477 (U) — 1990-08-15**

CARBURETTOR

Inventor(s): YUNYING ZHAO [CN] ± (ZHAO YUNYING)
Applicant(s): ZHAO YUNYING [CN] ± (ZHAO YUNYING)
Classification: - **international:** *F02M3/05*; (IPC1-7): F02M3/05
- **cooperative:**
Application number: CN1989217629U 19890927
Priority number(s): CN1989217629U 19890927

Abstract of CN2060477 (U)

The utility model relates to a carburetor used for a combustion engine. The carburetor used for a combustion engine is characterized in that a fuel oil switch is arranged at a fuel inlet of a carburetor, and a restoring spring is arranged on a valve core of the fuel oil switch. A torsional handle of the valve core is connected with an operation draw rod. When an automobile is put into gear to slide down a slope, the fuel oil switch is closed by a driver through the operation draw rod, and the purpose of oil saving is achieved. When the operation draw rod is released, the fuel oil switch is automatically restored. The structure of the carburetor used for a combustion engine is simple. The current carburetor is convenient to modify. The carburetor used for a combustion engine is particularly suitable for a vehicle which often runs in a mountain area.



(12) 实用新型专利申请说明书

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[51] Int.Cl⁵

F02M 3/05

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[44] 专利代理机构 河北省专利事务所

代理人 朱树强

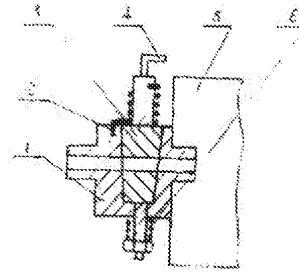
说明书页数: 2

附图页数: 2

[54] 实用新型名称 一种汽化器

[57] 摘要

供燃油发动机使用的汽化器,其特征是汽化器的燃料人口处设有一燃油开关该开关的阀芯上设有复位弹簧,阀芯把柄与操作拉杆连接。当汽车下坡挂挡滑行时,司机经拉杆关闭燃油开关,达到节油目的;解除拉杆,燃油开关自动复位。本实用新型结构简单,对原行汽化器改造方便,特别适用于经常在山区行驶的车辆。



(图2) 图1A52号

权 利 要 求 书

1、一种燃烧发动机使用的汽化器，其特征在于所述的汽化器燃油入口处，有一燃油开关。

2、根据权利要求1所述的汽化器，其特征在于燃油开关由阀体1、复位弹簧2、阀芯3、扭把4和拉紧弹簧6组成。

3、根据权利要求1或2所述的汽化器，其特征在于所述阀体1与汽化器外壳5，可以设计为一体或分离式。

一种汽化器

本实用新型属于一种供能烧发动机使用的汽化器。

现有汽车发动机使用的汽化器，燃油入口都没有燃油开关，按操作规程规定，汽车下坡时，不得空挡滑行，以保证汽车发动机带动压气机工作，使刹车有足够气压，而汽车下坡挂挡滑行时，发动机处于被驱动状态，发动机不需要汽化器供给可燃混合汽，现有技术决定了只要发动机工作，燃油泵就通过汽化器向发动机供给可燃混合汽，这样大量的燃油就被浪费掉。

本实用新型的目的是：当汽车下坡挂挡滑行时，关闭汽化器燃油入口，使发动机在不能燃油的情况下，带动机油泵、压气机工作，达到下坡节油的目的。

以下结合附图对本实用新型进行详细描述。

附图1为汽车发动系统示意图。

附图2为本实用新型燃油开关结构示意图。

参看附图1，发动机工作时，带动机油泵、燃油泵和压气机工作，机油泵向发动机供给润滑油，燃油泵通过汽化器向发动机供给可燃混合汽，压气机供刹车足够的气压，所以现有技术的缺点是，只要发动机工作，燃油泵就会通过汽化器向发动机供给可燃混合汽。

当汽车下坡时，汽车可挂挡滑行，由于发动机处于被驱动状态，不需要汽化器供给可燃混合汽，司机可通过拉杆关闭汽化器燃油入口开关，使燃油不能进入汽化器，同时关闭点火开关，发动机在不

烧燃油的情况下，带动机油泵、压气机工作，这样即保证了发动机的润滑和刹车气压，又达到节省燃油的目的。下坡终止，打开点火开关和汽化器燃油入口开关，汽车恢复正常运行。

参看图2，汽化器燃油进口，由阀体1、复位弹簧2、阀芯3、拉把4及拉紧弹簧6组成了燃油开关。阀体1与汽化器外壳5可是分离式，也可制成一体。需要关闭燃油进口时，司机通过拉把驱动拉把4，使阀芯3上的孔与阀体1上的孔错开，使汽化器进口断开，释放拉杆。阀芯3在复位弹簧2作用下复位，打开汽化器进口。拉紧弹簧6将阀芯3与阀体1紧密接触，以防接触面漏油。

本实用新型结构简单，对经常行驶在山区的车辆，节油效果更显著，实现了车辆下坡挂档安全滑行，可广泛用于各种汽油车和柴油车。

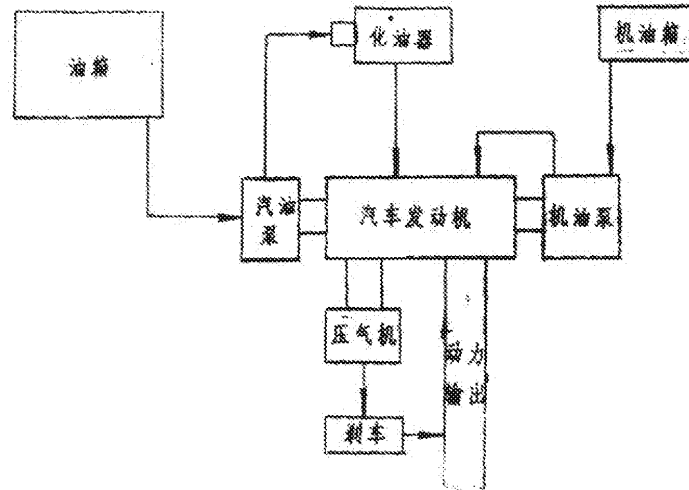


图1

2

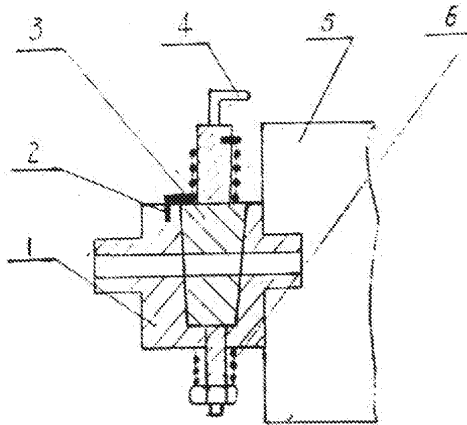


图2

Electronic Acknowledgement Receipt	
EFS ID:	31860663
Application Number:	14738060
International Application Number:	
Confirmation Number:	9670
Title of Invention:	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE
First Named Inventor/Applicant Name:	Mark J. Sarder
Customer Number:	26629
Filer:	Stephanie Mueller Laundre/Robyn Templin
Filer Authorized By:	Stephanie Mueller Laundre
Attorney Docket Number:	CET1090.019
Receipt Date:	22-FEB-2018
Filing Date:	12-JUN-2015
Time Stamp:	14:47:42
Application Type:	Utility under 35 USC 111(a)

Payment information:

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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	SupplIDS.pdf	1034613 08ef55ceaa0f84377c6973945e0da01144ac ebc4	no	4
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2	Foreign Reference	FPD1-CN2060477U.pdf	451233	no	7
			2141ee71ce889dab107045535acd687116525e46		
Warnings:					
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Total Files Size (in bytes):			1485846		
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Customer No. 26629
Confirmation No. 9670

Patent
Attorney Docket No. CET1090.019

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Sarder et al.
Serial No. : 14/738,060
Filed : June 12, 2015
For : DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE
Group Art No. : 3747
Examiner : Kevin A. Lathers

CERTIFICATION UNDER 37 CFR 1.8(a) and 1.10

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37 CFR 1.8(a)

37 CFR 1.10

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Date: November 3, 2017

/Robyn L. Templin/
Signature

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT/RESPONSE TO OFFICE ACTION
MAILED AUGUST 3, 2017

Dear Sir:

Responsive to the Office Action mailed August 3, 2017, please consider the following remarks:

In the Claims

1. (Original) A mechanical fuel lockout switch for a dual fuel engine comprising:
a mechanical fuel valve actuateable between a first position and a second position to selectively control fuel flow to the dual fuel engine from a first fuel source through a first fuel line and a second fuel source through a second fuel line; and
a fuel lockout apparatus coupled to the mechanical fuel valve;
wherein the mechanical fuel lockout switch:
communicates the first fuel source to the dual fuel engine and prevents communication between the second fuel source and the dual fuel engine when the mechanical fuel valve is in the first position, and
communicates the second fuel source to the dual fuel engine and interrupts the first fuel source communication with the dual fuel engine when in the second position.
2. (Original) The mechanical fuel lockout switch for a dual fuel engine of claim 1, wherein the fuel lockout apparatus prevents actuation of the mechanical fuel valve to the first position when the second fuel source communicates with the dual fuel engine.
3. (Original) The mechanical fuel lockout switch for a dual fuel engine of claim 1, wherein the fuel lockout apparatus is configured to:
prevent the second fuel source from coupling to the second fuel line while the mechanical fuel valve is in the first position; and
permit the second fuel source to couple to the second fuel line while the mechanical fuel valve is in the second position.
4. (Original) The mechanical fuel lockout switch for a dual fuel engine of claim 3, wherein the fuel lockout apparatus comprises a flange rigidly coupled to the mechanical fuel valve that covers an inlet of the second fuel line while the mechanical fuel valve is in the first position and uncovers the inlet of the second fuel line while the mechanical fuel valve is in the second position.

5. (Original) The mechanical fuel lockout switch for a dual fuel engine of claim 4, wherein the mechanical fuel valve rotates between the first position and the second position and the flange rotates transversely across the inlet of the second fuel line.

6. (Original) The mechanical fuel lockout switch for a dual fuel engine of claim 4, further comprising;

a first end of a quick-disconnect hose coupling attached to the inlet of the second fuel line; and

a second end of the quick-disconnect hose coupling attached to the second fuel source to mate with the first end of the quick-disconnect hose coupling to couple the second fuel source to the second fuel line.

7. (Original) The mechanical fuel lockout switch for a dual fuel engine of claim 1, wherein the mechanical fuel valve and the fuel lockout apparatus operate together to ensure that fuel from the first fuel source and fuel from the second fuel source are not simultaneously delivered to the dual fuel engine.

8. (Original) The mechanical fuel lockout switch for a dual fuel engine of claim 7, wherein the first fuel source provides liquid fuel from a liquid fuel tank to the dual fuel engine and the second fuel source provides gaseous fuel from a pressurized fuel container to the dual fuel engine.

9. (Original) A dual fuel generator and fuel delivery system comprising:

a dual fuel generator configured to operate on a liquid fuel supplied from a liquid fuel source through a liquid fuel line and a gaseous fuel supplied from a pressurized fuel source through a gaseous fuel line;

a fuel regulator system located off board the dual fuel generator, the fuel regulator system comprising:

a primary pressure regulator coupled to a service valve of the pressurized fuel source and configured to regulate the fuel supplied from the pressurized fuel source to a reduced pressure; and

a secondary pressure regulator coupled to the primary pressure regulator and configured to regulate the gaseous fuel supplied from the primary pressure regulator to a desired pressure for delivery through the gaseous fuel line to operate the dual fuel generator; and
a mechanical fuel valve actuatable between a first position and a second position to selectively control fuel flow to the dual fuel generator from the liquid fuel source through the liquid fuel line and the pressurized fuel source through the gaseous fuel line.

10. (Original) The dual fuel generator and fuel delivery system of claim 9 further comprising a fuel lockout apparatus coupled to the mechanical fuel valve; and

wherein when the mechanical fuel valve is in the first position, the fuel lockout apparatus communicates the liquid fuel source to the dual fuel generator and prevents the pressurized fuel source from coupling to the dual fuel generator, and actuation of the mechanical fuel valve to the second position causes the fuel lockout apparatus to permit the pressurized fuel source to couple to the dual fuel generator, and interrupts the liquid fuel source communication with the dual fuel generator.

11. (Original) The dual fuel generator and fuel delivery system of claim 9, wherein mechanical fuel valve opens and closes the liquid fuel line to selectively control fuel flow from the liquid fuel source to the dual fuel generator; and further comprises:

a fuel lockout apparatus coupled to the mechanical fuel valve and configured to prevent the pressurize fuel source from coupling to the gaseous fuel line while the mechanical fuel valve opens the liquid fuel line, and permit the pressurized fuel source to couple to the gaseous fuel line while the mechanical fuel valve closes the liquid fuel line.

12. (Original) The dual fuel generator and fuel delivery system of claim 11, wherein the fuel lockout apparatus is further configured to prevent the mechanical fuel valve from opening the liquid fuel line while the dual fuel generator receives fuel from the pressurized fuel source.

13. (Original) The dual fuel generator and fuel delivery system of claim 11, wherein the fuel lockout apparatus further comprises a fuel inlet cover that actuates with the mechanical fuel valve to cover an inlet of the gaseous fuel line while the mechanical fuel valve opens the liquid fuel line and to uncover mechanical fuel lockout switch the inlet of the gaseous fuel line when the mechanical fuel valve closes the liquid fuel line.

14. (Original) The dual fuel generator and fuel delivery system of claim 9, further comprising:

a first end of a quick-connect hose coupling coupled to an outlet of the secondary pressure regulator; and

a second end of the quick-connect hose coupling coupled to an inlet of the gaseous fuel line to mate with the first end of the quick-connect hose coupling to couple the secondary pressure regulator to the gaseous fuel line.

15. (Original) The dual fuel generator and fuel delivery system of claim 9, further comprising a regulator mounting device secured to the pressurized fuel source with at least the secondary pressure regulator mounted on the regulator mounting device.

16. (Original) The dual fuel generator and fuel delivery system of claim 15, wherein the primary pressure regulator is mounted on the regulator mounting device.

17. (Original) The dual fuel generator and fuel delivery system of claim 16, wherein the pressurized fuel source comprises a pressurized fuel container having a collar; and

wherein the regulator mounting device secures to the collar so that the primary and secondary pressure regulators are positioned adjacent each other along an outer periphery of the collar.

18. (Original) The dual fuel generator and fuel delivery system of claim 9, wherein the primary and secondary pressure regulators are integral components of a dual stage pressure regulator.

19. (Original) A method of assembling a mechanical fuel lockout switch for an internal combustion engine comprising:

providing an internal combustion engine configured to operate on a fuel from a first fuel source and a different fuel from a second fuel source;

coupling a mechanical fuel valve to the internal combustion engine actuateable between a first position and a second position to selectively control fuel flow to the internal

combustion engine from the first fuel source through a first fuel line and the second fuel source through a second fuel line; and

coupling a fuel lockout apparatus to the mechanical fuel valve;

wherein when the mechanical fuel valve is in the first position, the fuel lockout apparatus communicates the first fuel source to the internal combustion engine and prevents the second fuel source from coupling to the internal combustion engine, and actuation of the mechanical fuel valve to the second position causes the fuel lockout apparatus to permit the second fuel source to couple to the internal combustion engine, and interrupts the first fuel source communication with the internal combustion engine.

20. (Original) The method of claim 19, wherein the fuel lockout apparatus prevents actuation of the mechanical fuel valve to the first position when the second fuel source is coupled to the internal combustion engine.

21. (Original) The method of claim 20, wherein the fuel lockout apparatus is further configured to:

prevent coupling of the second fuel source to the second fuel line while the mechanical fuel valve is in the first position; and

permit coupling of the second fuel source to the second fuel line while the mechanical fuel valve is in the second position.

22. (Original) The method of claim 19, wherein the fuel lockout apparatus comprises a fuel inlet cover configured to actuate in unison with the mechanical fuel valve to cover a fuel inlet on the internal combustion engine for the second fuel source when the mechanical fuel valve is in the first position and uncover the fuel inlet when the mechanical fuel valve is in the second position.

23. (Original) The method of claim 19, further comprising coupling a fuel regulator system to the second fuel source to reduce fuel pressure therefrom and deliver fuel to the second fuel line at a pressure required for operation of the internal combustion engine.

24. (Original) The method of claim 23, further comprising mounting the fuel regulator system to the second fuel source located off-board the internal combustion engine.

25. (Original) The method of claim 23, further comprising:
coupling one end of a quick-disconnect hose coupling to an inlet on the internal combustion engine for the second fuel source; and
coupling a mating end of the quick-disconnect hose coupling to an outlet of the fuel regulator system.
26. (Original) The method of claim 19, further comprising providing gasoline in a liquid fuel tank as the first fuel source and LPG in a pressurized fuel container as the second fuel source.

REMARKS

Claims 1-26 are pending in the present application. In the Office Action mailed August 3, 2017, the Examiner rejected claims 19-26 under 35 U.S.C. §112(b) or 35 U.S.C. §112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention. The Examiner next rejected claims 1-3, 7-10, 14-20, and 22-26 under 35 U.S.C. §102(a)(1) as being anticipated by Champion (Champion Power (2014, Dec. & Jan.) 100153 Manual, retrieved from http://www.championpowerequipment.com/media/2400/100153_manual-english_12-4-14.pdf). Claims 1-3, 7-10, and 14-18 were rejected on the ground of nonstatutory double patenting as being unpatentable over claim 1 of U.S. Patent No. 9,435,273.

Claims 4-6 and 11-13 were indicated as containing allowable subject matter. Such indication is appreciated.

Rejection under 35 U.S.C. §112(b) or 35 U.S.C. §112 (pre-AIA), second paragraph

The Examiner rejected claims 19-26 under 35 U.S.C. §112(b) or 35 U.S.C. §112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

In setting forth the rejection, the Examiner asserted that “[c]laims 19-26 provides for the use of a mechanical fuel switch on an internal combustion engine, but, since the claim does not set forth any steps involved in the method process of assembling the engine as is set forth as the claim objective, it is unclear what method/process applicant is intending to encompass.” *Office Action*, August 3, 2017, p. 2. Applicant respectfully disagrees with the rejection.

According to MPEP §2173.02, “[i]n reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim appraises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph.” *MPEP §2173.02*. That is, “[a] decision on whether a claim is indefinite under 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph requires a determination of whether those skilled in the art would understand what is claimed when the claim is read in light of the specification.” *Id.* MPEP §2173.02 further states that the Examiner “should allow claims which define the patentable subject matter with a reasonable degree of particularity and distinctness,” and that “[s]ome latitude in the manner of expression and the aptness of terms should be permitted.” *Id.* The standard for compliance with

the definiteness requirement of 35 U.S.C. 112(b) “is whether the claim meets the threshold requirements of clarity and precision set forth in the statute, not whether more suitable language or modes of expression are available.” *Id.*

Claim 19 calls for “[a] method of assembling a mechanical fuel lockout switch for an internal combustion engine,” with the claim then setting forth steps for providing such an assembly of a mechanical fuel lockout switch. The claimed steps include “coupling a mechanical fuel valve to the internal combustion engine” and “coupling a fuel lockout apparatus to the mechanical fuel valve.” That claim 19 does not also set forth “any steps involved in the method/process of assembling the engine,” as asserted by the Examiner, is immaterial as to whether the claim is definite under 35 U.S.C. §112, second paragraph, as the claim makes clear that the claimed method is one of “assembling a mechanical fuel lockout switch for an internal combustion engine,” and not of assembling an internal combustion engine itself. As claim 19 calls for a step of “providing an internal combustion engine” and then calls for detailed steps of “coupling a mechanical fuel valve to the internal combustion engine” and “coupling a fuel lockout apparatus to the mechanical fuel valve,” Applicant believes that those skilled in the art would understand what is called for in claim 19 and that claim 19 meets the threshold requirements of clarity and precision, such that claim 19 is definite under 35 U.S.C. §112, second paragraph.

In light of at least the above, Applicant contends that claim 19 and all claims depending therefrom are definite, and therefore respectfully requests withdrawal of the rejection of claims 19-26 under 35 U.S.C. §112, second paragraph.

Rejection under 35 U.S.C. §102(a)(1) as being anticipated by Champion 100153 Manual

Claims 1, 9, and 19

The Examiner rejected claims 1-3, 7-10, 14-20, and 22-26 - including independent claims 1, 9, and 19 - under 35 U.S.C. §102(a)(1) as being anticipated by Champion (Champion Power (2014, Dec. & Jan.) 100153 Manual.

In setting forth a collective rejection of claims 1-3, 7-10, 14-20, and 22-26, the Examiner asserted that:

Regarding claims 1-3, 7-10, 14-20, and 22-26, the manual of Champion clearly anticipates the entirety of the claim limitations. The manual discloses a dual fuel generator internal combustion engine (Title page) which makes use [of] a fuel selector switch and valves (shown in picture on title page and elaborated upon through the text) to selectively allow gasoline or propane into the engine,

the propane being using a hose and passing through two regulators, one on the line and one within as per part #102 and the “fuel metering system” regulator disclosed on the last page.

Office Action, supra at 3. Applicant respectfully disagrees with the rejection and believes each of independent claims 1, 9, and 19 to be patentably distinct from that which is disclosed in Champion. That is, Champion does not anticipate that which is called for in independent claims 1, 9, and 19, as anticipation under pre-AIA 35 U.S.C. §102(a)(1) requires that “[t]he identical invention must be shown [in the reference] in as complete detail as is contained in the ... claim.” *MPEP* §2131 (citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). As will be set forth in detail here below, Champion does not disclose each and every element of any of independent claims 1, 9, and 19 and thus does not anticipate the claims, as “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *MPEP* §2131 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987)).

Initially, Applicant believes that the present rejection of independent claims 1, 9, and 19 (and more generally all of claims 1-3, 7-10, 14-20, and 22-26), on its face, is deficient. According to *MPEP* § 706, “[t]he goal of examination is to clearly articulate any rejection early in the prosecution process so that the Applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity.” *MPEP* §706. With respect to the rejection of the pending claims, the Examiner merely made blanket statements that Champion discloses the claimed elements, without giving any indication where the elements were allegedly taught in Champion. See *Office Action*, supra at 3. That is, the Examiner has not indicated “the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line number(s) where appropriate,” as required under *MPEP* §706.02(j). Accordingly, the Examiner has not “clearly articulate[d]” the rejection of any of claims 1-3, 7-10, 14-20, and 22-26, and the rejection is therefore believed to be deficient.

Regardless of the above, Applicant believes the rejection of at least of independent claims 1, 9, and 19 to be unsustainable. Specifically, Applicant believes that Champion does not teach or disclose that which is called for in independent claims 1, 9, and 19.

Claim 1 calls for a mechanical fuel lockout switch for a dual fuel engine provides for the selection of a desired fuel to operate the engine. The mechanical fuel lockout switch includes a mechanical fuel valve and a fuel lockout apparatus. The mechanical fuel valve actuates between a first position and a second position to selectively control fuel flow to the dual fuel engine from a

first fuel source through a first fuel line and a second fuel source through a second fuel line. The fuel lockout apparatus couples to the mechanical fuel valve ensuring individual communication of the fuel sources to the engine. The mechanical fuel lockout switch communicates the first fuel source to the dual fuel engine and prevents communication between the second fuel source and the dual fuel engine when the mechanical fuel valve is in the first position, and communicates the second fuel source to the dual fuel engine and interrupts the first fuel source communication with the dual fuel engine when in the second position.

Claim 9 calls for a dual fuel generator and fuel delivery system includes a dual fuel generator configured to operate on a liquid fuel supplied from a liquid fuel source through a liquid fuel line and a gaseous fuel supplied from a pressurized fuel source through a gaseous fuel line. The dual fuel generator and fuel delivery system also includes a fuel regulator system located off board the dual fuel generator to control the pressure of fuel from the pressurized fuel source and deliver the fuel at a desired pressure for operation of the generator. The fuel regulator system includes a primary pressure regulator coupled to a service valve of the pressurized fuel source and configured to regulate the fuel supplied from the pressurized fuel source to a reduced pressure. The fuel regulator system also includes a secondary pressure regulator coupled to the primary pressure regulator and configured to regulate the gaseous fuel supplied from the primary pressure regulator to a desired pressure for delivery through the gaseous fuel line to operate the dual fuel generator. The dual fuel generator and fuel delivery system further includes a mechanical fuel valve actuateable between a first position and a second position to selectively control fuel flow to the dual fuel generator from the liquid fuel source through the liquid fuel line and the pressurized fuel source through the gaseous fuel line.

Claim 19 calls for a method of assembling a mechanical fuel lockout switch for an internal combustion engine includes providing an internal combustion engine configured to operate on a fuel from a first fuel source and a different fuel from a second fuel source. The method also includes coupling a mechanical fuel valve to the internal combustion engine actuateable between a first position and a second position to selectively control fuel flow to the internal combustion engine from the first fuel source through a first fuel line and the second fuel source through a second fuel line. The method further includes coupling a fuel lockout apparatus to the mechanical fuel valve. When the mechanical fuel valve is in the first position, the fuel lockout apparatus communicates the first fuel source to the internal combustion engine and prevents the second fuel source from coupling to the internal combustion engine, and actuation of the mechanical fuel valve to the second position causes the fuel lockout apparatus to permit the

second fuel source to couple to the internal combustion engine, and interrupts the first fuel source communication with the internal combustion engine.

Based on a reading of *Champion*, the reference discloses a dual fuel generator that “is a gasoline or LPG engine driven, alternating current (AC) generator. *See Champion*, Title page and p. 1. The generator includes a fuel selector switch, identified as component (10) on p. 6 of *Champion* and the drawing included thereon. *See Champion*, p. 6. The fuel selector switch is described as being “on the front panel of the generator... to choose between the fuel source desired, Gas or LPG,” and “[t]o select a fuel source simply slide the switch cover to either the right or left, and this will uncover the fuel valve of the fuel selected, [where] the LPG fuel valve (A) is to the left of the switch cover [and] the gas fuel valve (B) is to the right of the switch cover.” *Id.* at 14. “Once a fuel source has been selected, the user must turn the fuel valve to the vertical position to open the fuel valve (1)” and “[t]o turn a fuel valve to the off position the valve must be in the horizontal position (2).” *Id.* “The fuel selector switch cover is specifically designed not to slide to either side while a specific fuel has been selected and the valve is in the “ON” position [but] only when the fuel valves are in the “OFF” position can the cover slide side to side.” *Id.*

However, *Champion* does not disclose that which is specifically called for in each of claims 1, 9, and 19 and does not anticipate those claims, as *Champion* does not expressly or inherently describe each and every element set forth therein, as required for anticipation under 35 U.S.C. §102(a)(1).

Claim 1 is distinct over *Champion* at least for the reason(s) that *Champion* does not disclose a mechanical fuel lockout switch for a dual fuel engine that includes “a mechanical fuel valve [that] actuates between a first position and a second position to selectively control fuel flow to the dual fuel engine from a first fuel source through a first fuel line and a second fuel source through a second fuel line” and/or “a fuel lockout apparatus couple[d] to the mechanical fuel valve ensuring individual communication of the fuel sources to the engine.” First, *Champion* discloses separate valves for the separate fuel sources – LPG fuel valve (A) and gas fuel valve (B), *see Champion*, p. 14, but not a single mechanical fuel valve that actuates between a first position and a second position to selectively control fuel flow to the dual fuel engine from a first fuel source through a first fuel line and a second fuel source through a second fuel line, as called for in claim 1. Second, *Champion* only discloses that the selector switch cover slides horizontal back and forth to selectively cover one of the LPG fuel valve (A) and gas fuel valve (B), but not that the switch cover is coupled to either of the fuel valves, as called for in claim 1 “a fuel lockout

apparatus couple[d] to the mechanical fuel valve”). Accordingly, Champion does not anticipate claim 1 under 35 U.S.C. §102(a)(1).

Claim 9 is distinct over Champion at least for the reason(s) that Champion does not disclose a dual fuel generator and fuel delivery system that includes “a fuel regulator system located off board the dual fuel generator [and having]... a primary pressure regulator coupled to a service valve of the pressurized fuel source and a secondary pressure regulator coupled to the primary pressure regulator and configured to regulate the gaseous fuel supplied from the primary pressure regulator to a desired pressure for delivery through the gaseous fuel line to operate the dual fuel generator,” nor does Champion disclose “a mechanical fuel valve actuateable between a first position and a second position to selectively control fuel flow to the dual fuel generator from the liquid fuel source through the liquid fuel line and the pressurized fuel source through the gaseous fuel line.” First, Champion only discloses use of a “LPG Hose with Regulator,” *see Champion*, p. 8, but provides no teaching of a fuel regulator system located off board the dual fuel generator and having a primary pressure regulator and separate secondary pressure regulator, as called for in claim 9. Second, Champion discloses separate valves for the separate fuel sources – LPG fuel valve (A) and gas fuel valve (B), *see Champion*, p. 14, but not a mechanical fuel valve actuateable between a first position and a second position to selectively control fuel flow to the dual fuel generator from the liquid fuel source through the liquid fuel line and the pressurized fuel source through the gaseous fuel line, as called for in claim 9. Accordingly, Champion does not anticipate claim 9 under 35 U.S.C. §102(a)(1).

Claim 19 is distinct over Champion at least for the reason(s) that Champion does not disclose a method that includes “coupling a mechanical fuel valve to the internal combustion engine actuateable between a first position and a second position to selectively control fuel flow to the internal combustion engine from the first fuel source through a first fuel line and the second fuel source through a second fuel line” and “coupling a fuel lockout apparatus to the mechanical fuel valve.” First, Champion discloses separate valves for the separate fuel sources – LPG fuel valve (A) and gas fuel valve (B), *see Champion*, p. 14, but not a single mechanical fuel valve that is actuateable between a first position and a second position to selectively control fuel flow to the internal combustion engine from the first fuel source through a first fuel line and the second fuel source through a second fuel line, as called for in claim 19. Second, Champion only discloses that the selector switch cover slides horizontal back and forth to selectively cover one of the LPG fuel valve (A) and gas fuel valve (B), but not a step of *coupling* the switch cover to either of the LPG or gas fuel valve, as called for in claim 19, nor does Champion disclose that the selector

switch would communicate the first fuel source to the internal combustion engine and prevent the second fuel source from coupling to the internal combustion engine when in the first position and cause the fuel lockout apparatus to permit the second fuel source to couple to the internal combustion engine and interrupt the first fuel source communication with the internal combustion engine when in the second position, as further called for in claim 19.

For at least the reasons set forth above, Champion does not anticipate any of claims 1, 9, or 19 under 35 U.S.C. §102(a)(1) since, according to MPEP §2131, “to anticipate a claim, the reference must teach every element of the claim.” Appellant therefore respectfully requests withdrawal of the rejection of claims 1, 9, and 19, along with the rejection of all claims depending therefrom.

Double Patenting Rejection

The Examiner rejected claims 1-3, 7-10, and 14-18 on the ground of nonstatutory double patenting as being unpatentable over claim 1 of U.S. Patent No. 9,435,273 (hereinafter the “273 patent”), with the Examiner asserting that “the limitations of claims 1-3, 7-10, and 14-18 are disclosed by the limitations of claim 1 except a detachable hose and two regulators for the transfer of one fuel.” *Office Action*, supra at 5. The Examiner then further stated that “examiner takes official notice that it would have been obvious to one of ordinary skill in the art before the filing date of the invention to modify a dual fuel generator to include a fuel hose that can couple to and from the engine and two regulators to regulate the incoming pressure to the engine as these parts are not only routinely used in such a case but also are known to improve the fueling characteristics of the engine.” *Id.* Applicant respectfully disagrees with the rejection.

First, Applicant believes that Examiner’s application of Official Notice in rejecting claims 1-3, 7-10, and 14-18 is inappropriate under the Manual Patent Examining Procedure (MPEP). “The Examiner may take Official Notice of facts outside of the record which are capable of instant and unquestionable demonstration as being ‘well-known’ in the art.” *MPEP §2144.03*. However, MPEP §2144.03 is clear that “such rejections [relying on official notice] should be judiciously applied,” be “rare,” and be used “[i]n limited circumstances.” *Id.* Furthermore, “any facts so noticed should be of notorious character and serve only to ‘fill in the gaps’ in an insubstantial manner which might exist in the evidentiary showing made by the Examiner to support a particular ground for rejection.” *Id.* Applicant does not believe that the Examiner’s use of Official Notice is merely to “fill in the gaps.” That is, in as much as Applicant can gather from the limited statements/rationale set forth by the Examiner, it appears that the Examiner has taken

Official Notice of entire elements of the claims, thereby effectively attempting to teach substantial claim limitations, rather than simply “fill in the gaps.” Thus, the use of Official Notice is hereby traversed. The Examiner must “cite a reference in support of his or her position” should the Applicant traverse the assertion. *Id.*

Regardless of the above, Applicant believes that the double patenting rejection is improper. MPEP §804(II)(B)(1) states that any obviousness-type double patenting rejection should make clear:

(A) The differences between the inventions defined by the conflicting claims - a claim in the patent compared to a claim in the application; and

(B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue would have been an obvious variation of the invention defined in a claim in the patent. *Id.* (emphasis added).

The Examiner’s double patenting rejection of claims 1-3, 7-10, and 14-18 does not satisfy either of the requirements set forth in section (A) or section (B) of MPEP §804(II)(B)(1). Referring first to section (A), MPEP §804 requires a double patenting rejection make clear a claim-to-claim comparison between the referenced patent and the rejected claims. The Examiner’s rejection does not include any claim-to-claim comparison between the present application and the ‘273 patent. Instead, the Examiner relies on a generalized statement that “the limitations of claims 1-3, 7-10, and 14-18 are disclosed by the limitations of claim 1 except a detachable hose and two regulators for the transfer of one fuel” and a general reference to “official notice.” Since the Examiner’s rejection relies on a comparison of a merely generalized referenced to the entirety of claims 1-3, 7-10, and 14-18 to claim 1 of the ‘273 patent, rather than a claim-to-claim comparison, the rejection does not meet the requirements of MPEP §804 on its face. In order to satisfy the claim-to-claim comparison required by MPEP §804, the Examiner must make clear the differences between each of the claims of the present application and claim 1 of the ‘273 patent. The Examiner has not provided any such analysis to date, and therefore has not properly established the grounds required in section (A) of MPEP §804 for an obviousness-type double patenting rejection.

The Examiner also has not satisfied the requirements set forth in section (B) of MPEP §804 for establishing an obviousness-type double patenting rejection. Namely, the Examiner has not provided any reasoning as to why a person of ordinary skill in the art would conclude that

the invention defined in any of claims 1-3, 7-10, and 14-18 is an obvious variant of the invention defined in claim 1 of the '273 Patent. Again, the Examiner's rejection focuses solely on a generalized description of the invention as a whole (i.e., the collection of claims 1-3, 7-10, and 14-18) and does not specifically reference any of the claims of the present application or any of the claim elements specifically called for in claim 1 of the '273 patent. As such, the rejection of claims 1-3, 7-10, and 14-18 does not establish a reasoned comparison tied to the actual claims of the present application and does not satisfy the requirements of section (B) of MPEP §804.

In summary, nowhere has the Examiner identified the reasons why any of claims 1-3, 7-10, and 14-18 of the present application are obvious variants of the invention called for in claim 1 of the '273 patent. As such, the Examiner has not provided basis for the assertion that claims 1-3, 7-10, and 14-18 are not patentably distinct from claim 1 of the '273 patent as required to support a non-statutory double patenting rejection under 35 U.S.C. §101.

Notwithstanding the deficiencies in the rejection, Applicant further submits that the nonstatutory obviousness-type double patenting rejections should be withdrawn because the claims of the present application are patentably distinct from claim 1 of the '273 Patent. According to MPEP §804, in situations where as here the application under examination is the later-filed application, a nonstatutory obviousness-type double patenting rejection is appropriate where "the invention claimed in the application would have been anticipated by, or an obvious variation of, the invention claimed in the patent." *MPEP* §804.

In light of at least the above, Applicant respectfully asserts that the inventions claimed in the present application are not anticipated by, or an obvious variation of, the invention of claim 1 of the '273 patent, when taken alone or in combination with official notice. Applicant therefore believes the double patenting rejection to be improper and respectfully requests the withdrawal of the rejection of claims 1-3, 7-10, and 14-18 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of the '273 patent.

Conclusion

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-26.

Applicant appreciates the Examiner's consideration of these Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

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Dated: November 3, 2017
Attorney Docket No.: CET1090.019

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General Authorization and Extension of Time

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2623. Should no proper payment be enclosed herewith, as by credit card authorization being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2623. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extensions under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-2623. Please consider this a general authorization to charge any fee that is due in this case, if not otherwise timely paid, to Deposit Account No. 50-2623.

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Dated: November 3, 2017
Attorney Docket No.: CET1090.019

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First Named Inventor/Applicant Name:	Mark J. Sarder
Customer Number:	26629
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Response.pdf	196263	yes	18
			aaa465e2c894c76d1a34e4858cbcf1b10d382ed23		

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	18
Warnings:			
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 14/738,060		Filing Date 06/12/2015		☐ To be Mailed	
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO									
APPLICATION AS FILED – PART I									
(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)	
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A		N/A		N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A			
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL			
APPLICATION AS AMENDED – PART II									
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	11/03/2017	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 26	Minus	** 26	= 0	x \$40 =		0	
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	x \$210 =		0	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE		0	
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =			
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

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EXAMINER	
LATHERS, KEVIN ANTHONY	

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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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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sml@zpspatents.com

Office Action Summary	Application No. 14/738,060	Applicant(s) SARDER ET AL.	
	Examiner KEVIN A. LATHERS	Art Unit 3747	AIA (First Inventor to File) Status Yes

-- 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 MONTHS 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 06/12/2015.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

4) ☐ 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*

5) ☒ Claim(s) 1-26 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.

6) ☐ Claim(s) ____ is/are allowed.

7) ☒ Claim(s) 1-3, 7-10 and 14-26 is/are rejected.

8) ☒ Claim(s) 4-6 and 11-13 is/are objected to.

9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☒ The drawing(s) filed on 06/12/2015 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).

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).

Certified copies:

a) ☐ All b) ☐ Some** c) ☐ None of the:

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) ☒ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date ____.

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.

4) ☒ Other: NPL.

DETAILED ACTION

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Claim Rejections - 35 USC § 112

1. The following is a quotation of 35 U.S.C. 112(b):
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
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.

2. Claims 19-26 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.
3. Claims 19-26 provides for the use of a mechanical fuel switch on an internal combustion engine, but, since the claim does not set forth any steps involved in the method/process of assembling the engine as is set forth as the claim objective, it is unclear what method/process applicant is intending to encompass. This makes t

Claim Rejections - 35 USC § 102

4. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention.

5. Claim(s) 1-3, 7-10, 14-20, and 22-26 is/are rejected under 35 U.S.C. 102(a)(1) as being clearly anticipated by Champion (Champion Power (2014, Dec. & Jan.). 100153 Manual. Retrieved from

http://www.championpowerequipment.com/media/2400/100153_manual-english_12-4-14.pdf

6. Regarding claims 1-3, 7-10, 14-20, and 22-26, the manual of Champion clearly anticipates the entirety of the claim limitations. The manual discloses a dual fuel generator internal combustion engine (Title page) which makes use a fuel selector switch and valves (shown in picture on title page and elaborated upon through the text) to selectively allow gasoline or propane into the engine, the propane being using a hose couple and passing through two regulators, one on the line and one within as per part #102 and the "fuel metering system" regulator disclosed on the last page.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have

been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) - 706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For

more information about eTerminal Disclaimers, refer to
www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

8. Claims 1-3, 7-10, and 14-18 rejected on the ground of nonstatutory double patenting as being unpatentable over claim 1 of U.S. Patent No. 9,435,273. Although the claims at issue are not identical, they are not patentably distinct from each other because the limitations of claims 1-3, 7-10, and 14-18 are disclosed by the limitations of claim 1 except a detachable hose and two regulators for the transfer of one fuel. However, examiner takes official notice that it would have been obvious to one of ordinary skill in the art before the filing date of the invention to modify a dual fuel generator to include a fuel hose that can couple to and from the engine and two regulators to regulate the incoming pressure to the engine as these parts are not only routinely used in such a case but also are known to improve the fueling characteristics of the engine.

Allowable Subject Matter

9. Claims 4-6 and 11-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: The closest prior art fails to disclose or make obvious the use of a dual fuel lockout switch on a dual fuel internal combustion engine wherein when the lockout switch is in one position it prevents the fuel source from coupling to the fuel system *lines* of the engine.

11. Champion discloses a dual fuel system as discussed above, but its lockout switch does not prevent the hose of the propane tank from even coupling to the engine fuel system lines.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Monros (US 2014/0202430) discloses an engine which makes use of a gasoline supply 16 and a propane supply 18 which uses a selector switch and valve 20 to allow one or the other of the fuels to the engine (Fig. 1, shown). Stoltman (US 4,463,735) discloses an engine which makes use of a two fuels, a liquid and gaseous, which are metered by a fuel selection valve according to the pressure of the system (Fig. 1, shown).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN A. LATHERS whose telephone number is (571)272-1050. The examiner can normally be reached on 10:00 am-7:00 pm EST, Monday to Thursday.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lindsay Low can be reached on 571-272-1196. 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 USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KEVIN A LATHERS/
Examiner, Art Unit 3747

Notice of References Cited	Application/Control No. 14/738,060	Applicant(s)/Patent Under Reexamination SARDER ET AL.	
	Examiner KEVIN A. LATHERS	Art Unit 3747	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2014/0202430 A1	07-2014	Monros; Serge V.	F02D19/0615	123/445
*	B	US-9,435,273 B2	09-2016	Sarder; Mark J.		1/1
*	C	US-4,463,735	08-1984	Stoltman		123/525
	D	US-				
	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	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Champion Power (2014, Dec. & Jan.). 100153 Manul. Retrieved from http://www.championpowerequipment.com/media/2400/100153_manual-english_12-4-14.pdf
	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.

U.S. Patent and Trademark Office
PTO-892 (Rev. 01-2001)

Notice of References Cited

Part of Paper No. 20170727A



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BIB DATA SHEET

CONFIRMATION NO. 9670

SERIAL NUMBER 14/738,060	FILING or 371(c) DATE 06/12/2015 RULE	CLASS 123	GROUP ART UNIT 3747	ATTORNEY DOCKET NO. CET1090.019		
APPLICANTS Champion Engine Technology, LLC, Sussex, WI; INVENTORS Mark J. Sarder, Waukesha, WI; Aleko D. Sotiriades, Cedarburg, WI; James J. Dehn, Brookfield, WI; Leigh Jenison, Hartland, WI; ** CONTINUING DATA ***** ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** * SMALL ENTITY ** 06/22/2015						
Foreign Priority claimed ☐ Yes ☒ No	35 USC 119(a-d) conditions met ☐ Yes ☐ No	☐ Met after Allowance	STATE OR COUNTRY WI	SHEETS DRAWINGS 5	TOTAL CLAIMS 26	INDEPENDENT CLAIMS 3
Verified and Acknowledged	/KEVIN ANTHONY LATHERS/ Examiner's Signature	Initials				
ADDRESS ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (ZPS) 136 S WISCONSIN ST PORT WASHINGTON, WI 53074 UNITED STATES						
TITLE DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE						
FILING FEE RECEIVED 970	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit			

Search Notes 	Application/Control No. 14738060	Applicant(s)/Patent Under Reexamination SARDER ET AL.
	Examiner KEVIN A LATHERS	Art Unit 3747

CPC- SEARCHED		
Symbol	Date	Examiner
F02D19/0613, 16/0605, 19/0647	07/28/2017	/K.L./
Y02T10/36	07/28/2017	/K.L./

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

SEARCH NOTES		
Search Notes	Date	Examiner
EAST including inventor and assignee search.	07/28/2017	/K.L./
Google key word search (e.g. "dual fuel generator").	07/28/2017	/K.L./

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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<i>Index of Claims</i> 	Application/Control No. 14738060	Applicant(s)/Patent Under Reexamination SARDER ET AL.
	Examiner KEVIN A LATHERS	Art Unit 3747

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

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47									
CLAIM		DATE							
Final	Original	07/28/2017							
	1	✓							
	2	✓							
	3	✓							
	4	O							
	5	O							
	6	O							
	7	✓							
	8	✓							
	9	✓							
	10	✓							
	11	O							
	12	O							
	13	O							
	14	✓							
	15	✓							
	16	✓							
	17	✓							
	18	✓							
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	20	✓							
	21	✓							
	22	✓							
	23	✓							
	24	✓							
	25	✓							
	26	✓							

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)

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

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Mark J. Sarder et al.	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	CET1090.019	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4502453		1985-03-05	Kabasin et al.	
	2	5171487		1992-12-15	Hudz	
	3	5320078		1994-06-14	Lorraine	
	4	5450832		1995-09-19	Graf	
	5	5673670		1997-10-07	Powell et al.	
	6	6223730	B1	2001-05-01	Hasegawa et al.	
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.A.L./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number			
	Filing Date			
	First Named Inventor	Mark J. Sarder et al.		
	Art Unit			
	Examiner Name			
	Attorney Docket Number	CET1090.019		

	1							
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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							☐
If you wish to add additional Foreign Patent Document citation information please click the Add button Add								
NON-PATENT LITERATURE DOCUMENTS								Remove
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T ⁵
	1							☐
If you wish to add additional non-patent literature document citation information please click the Add button Add								
EXAMINER SIGNATURE								
Examiner Signature	/KEVIN A LATHERS/					Date Considered	05/03/2017	
*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.								
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.								

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Mark J. Sarder et al.	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	CET1090.019	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

- ☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

- ☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

- ☐ See attached certification statement.
- ☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.
- ☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Timothy J. Ziolkowski/	Date (YYYY-MM-DD)	2015-06-12
Name/Print	Timothy J. Ziolkowski	Registration Number	38368

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	5	"9435273"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/28 14:35
S1	445	F02D19/0613.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:25
S2	1204	F02D19/0605.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:25
S3	3408	F02D19/0647.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:25
S4	15258	Y02T10/36.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:25
S5	808	(S1 S2 S3 S4) and (switch valve) near20 (propane natural adj gas gaseous lng cng) near20 (gasoline liquid diesel)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:28
S6	79	(S1 S2 S3 S4) and (switch valve) near20 (propane natural adj gas gaseous lng cng) near20 (gasoline liquid diesel) and (second secondary auxiliary) near5 (regulat\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:29
S7	64	(S1 S2 S3 S4) and (switch valve) near20	US-PGPUB;	OR	OFF	2017/07/27

		(propane natural adj gas gaseous lng cng) near20 (gasoline liquid diesel) and (second secondary auxiliary) adj (regulat\$3 pressure)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			14:44
S8	28	("5450832" "20130220274" "5325835" "5320078" "4619240" "6082323" "6453877" "5171487" "6223730" "6213083" "4489699" "5287839" "8590510" "5673670" "4450821" "5816224" "6276345" "4502453" "20130047964" "4372276" "6401685" "7905469" "2722208" "4895124" "5161496" "5379740" "5438968" "5419291" "6914342" "8342158").PN.	USPAT	OR	OFF	2017/07/27 14:45
S9	124	("5450832" "20130220274" "5325835" "5320078" "4619240" "6082323" "6453877" "5171487" "6223730" "6213083" "4489699" "5287839" "8590510" "5673670" "4450821" "5816224" "6276345" "4502453" "20130047964" "4372276" "6401685" "7905469" "2722208" "4895124" "5161496" "5379740" "5438968" "5419291" "6914342" "8342158").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:45
S10	421	(duel dual) near5 fuel near20 (engine generator) same (switch valve) near20 between	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 14:46
S11	0	dual adj fuel near20 engine same "switchover valve"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 15:17
S12	44	dual adj fuel near20 engine same (switch switchover) near5 valve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 15:19
S13	49	"6591817"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 15:19
S14	63	("3799125" "4150645" "4265208" "4303049" "4305350" "4323046" "4353345" "4391251" "4398517" "4524033" "4671243" "5450832" "5524582" "5623907" "5720266" "5816224" "6035837").PN. OR ("6591817").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:20

S15	80	dual adj fuel near20 engine same (switch switchover select\$3) near5 valve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/27 15:21
S16	30	((("SARDER") near3 ("Mark"))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:25
S17	28	((("SOTIRIADES") near3 ("Aleko"))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:25
S18	41	((("DEHN") near3 ("James"))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:25
S19	15	((("JENISON") near3 ("Leigh"))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:25
S20	16	((("CHAMPION") near3 ("ENGINE") near3 ("TECHNOLOGY") near3 ("LLC"))).AANM.	USPAT	OR	OFF	2017/07/27 15:25
S21	19	((("CHAMPION") near3 ("ENGINE") near3 ("TECHNOLOGY") near3 ("LLC"))).as.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:26
S22	5	("20040240141" "20060169238" "20130098349" "20130122439" "4489699").PN. OR ("9435273").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:42
S23	41	("1973142" "2315882" "2381304" "4068639" "4227497" "4335697").PN. OR ("4489699").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 15:43
S24	97	(dual multi multiple plural plurality) adj fuel near20 engine same (switch switchover changeover change switch\$3) near5 (valve switch)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 16:02
S25	1	(09/813622).APP.	USPAT; USOCR	OR	OFF	2017/07/27 16:03
S26	63	("3799125" "4150645" "4265208" "4303049" "4305350" "4323046" "4353345" "4391251" "4398517" "4524033" "4671243" "5450832" "5524582" "5623907" "5720266" "5816224" "6035837").PN. OR ("6591817").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 16:03
S27	64	("4335697" "4393848" "4430978" "4606322" "4683864" "4825842" "4922862" "5379740" "5474047" "5479906" "5755211" "5775282").PN. OR ("6035837").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/07/27 16:34
S28	27	("5999888" "6543395" "4619240" "20140366577" "20120168023" "20140202430" "4463735" "5668310" "5224457").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/28 10:32
S29	0	(14/156204).APP.	USPAT; USOCR	OR	OFF	2017/07/28 11:33
S30	5	(gas gasoline liquid near5 fuel) near20	USPAT;	OR	OFF	2017/07/28

EAST Search History

		(propane natural adj gas) near20 (fill\$3 fueling) same (quick-connect connect\$3) near20 (cover flange)	USOCR			11:47
S31	109	(gas gasoline liquid near5 fuel) near20 (propane natural adj gas) near20 (fill\$3 fueling) same (quick-connect connect\$3) near20 (cover flange)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/28 11:47
S32	280	(gas gasoline liquid near5 fuel) near20 (propane natural adj gas) near20 (fill\$3 fueling) same (cover flange)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/28 11:48
S33	171	(gas gasoline liquid near5 fuel) near20 (propane natural adj gas) near20 (fill\$3 fueling) same (cover flange) not S31	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/07/28 11:48

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	Filing Date		2015-06-12
	First Named Inventor	Mark J. Sarder et al.	
	Art Unit	3747	
	Examiner Name		
	Attorney Docket Number	CET1090.019	

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	1	2722208		1955-11-01	Conroy, Jr. et al.	
	2	4372276		1983-02-08	Bernhardsson et al.	
	3	4450821		1984-05-29	Venning et al.	
	4	4489699		1984-12-25	Poehlman	
	5	4619240		1986-10-28	Bedford et al.	
	6	4895124		1990-01-23	Bartholomew	
	7	5287839		1994-02-22	Kondou et al.	
	8	5379740		1995-01-10	Moore et al.	

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	9	5419291		1995-05-30	Kimata et al.	
	10	5438968		1995-08-08	Johnson et al.	
	11	5816224		1998-10-06	Welsh et al.	
	12	6082323		2000-07-04	Winberg	
	13	6213083	B1	2001-04-10	Winberg	
	14	6276345	B1	2001-08-21	Nelson et al.	
	15	6401685	B1	2002-06-11	Warner	
	16	6453877	B1	2002-09-24	Lucier et al.	
	17	6914342	B1	2005-07-05	French	
	18	7905469	B2	2011-03-15	Nickels et al.	
	19	8342158	B2	2013-01-01	Ulrey et al.	

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	20	8590510	B2	2013-11-26	Surnilla et al.	
	21	5161496		1992-11-10	Matsushima et al.	
	22	5325835		1994-07-05	Kimata et al.	

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1	Honda EU20i LPG, March 20, 2012, https://www.youtube.com/watch?v=yBpq33aJmR0	☐
2	JOHNSON et al., "Electronic Direct Fuel Injection (EDFI) for Small Two-Stroke Engines," SAE Technical Paper 1999-01-3312, Proceedings of the 1999 SAE Small Engine Technology Conference, Madison, WI, September 28-30, 1999, pp. 1-15	☐

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	Art Unit	3747
	Examiner Name	
	Attorney Docket Number	CET1090.019

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Signature	/Timothy J. Ziolkowski/	Date (YYYY-MM-DD)	2015-10-28
Name/Print	Timothy J. Ziolkowski	Registration Number	38368

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/738,060	06/12/2015	Mark J. Sarder	CET1090.019

CONFIRMATION NO. 9670

PUBLICATION NOTICE

26629
ZIOLOKOWSKI PATENT SOLUTIONS GROUP, SC (ZPS)
136 S WISCONSIN ST
PORT WASHINGTON, WI 53074



Title:DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE

Publication No.US-2016-0363058-A1

Publication Date:12/15/2016

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	First Named Inventor	Mark J. Sarder et al.	
	Art Unit	3747	
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	2	4372276		1983-02-08	Bernhardsson et al.	
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	4	4489699		1984-12-25	Poehlman	
	5	4619240		1986-10-28	Bedford et al.	
	6	4895124		1990-01-23	Bartholomew	
	7	5287839		1994-02-22	Kondou et al.	
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	9	5419291		1995-05-30	Kimata et al.	
	10	5438968		1995-08-08	Johnson et al.	
	11	5816224		1998-10-06	Welsh et al.	
	12	6082323		2000-07-04	Winberg	
	13	6213083	B1	2001-04-10	Winberg	
	14	6276345	B1	2001-08-21	Nelson et al.	
	15	6401685	B1	2002-06-11	Warner	
	16	6453877	B1	2002-09-24	Lucier et al.	
	17	6914342	B1	2005-07-05	French	
	18	7905469	B2	2011-03-15	Nickels et al.	
	19	8342158	B2	2013-01-01	Ulrey et al.	

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	20	8590510	B2	2013-11-26	Surnilla et al.	
	21	5161496		1992-11-10	Matsushima et al.	
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	2	20130220274	A1	2013-08-29	Deshpande et al.	

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1	Honda EU20i LPG, March 20, 2012, https://www.youtube.com/watch?v=yBpq33aJmR0	☐
2	JOHNSON et al., "Electronic Direct Fuel Injection (EDFI) for Small Two-Stroke Engines," SAE Technical Paper 1999-01-3312, Proceedings of the 1999 SAE Small Engine Technology Conference, Madison, WI, September 28-30, 1999, pp. 1-15	☐
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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.		

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14738060
	Filing Date		2015-06-12
	First Named Inventor	Mark J. Sarder et al.	
	Art Unit	3747	
	Examiner Name		
	Attorney Docket Number	CET1090.019	

CERTIFICATION STATEMENT			
Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):			
☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).			
OR			
☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).			
☐ See attached certification statement.			
☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.			
☐ A certification statement is not submitted herewith.			
SIGNATURE			
A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.			
Signature	/Timothy J. Ziolkowski/	Date (YYYY-MM-DD)	2015-10-28
Name/Print	Timothy J. Ziolkowski	Registration Number	38368
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.			

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	23918070
Application Number:	14738060
International Application Number:	
Confirmation Number:	9670
Title of Invention:	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE
First Named Inventor/Applicant Name:	Mark J. Sarder
Customer Number:	26629
Filer:	Timothy J. Ziolkowski/Robyn Templin
Filer Authorized By:	Timothy J. Ziolkowski
Attorney Docket Number:	CET1090.019
Receipt Date:	28-OCT-2015
Filing Date:	12-JUN-2015
Time Stamp:	15:18:21
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no				
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	SupplIDS.pdf	613139 57b2d0870564b237f705b1eca1adeb24f7a bc744	no	6
Warnings:					
Information:					

2	Non Patent Literature	NPL1-HONDA_EU20i_LPG.pdf	15304933 ab3bddf9b920528fa110a17a5b7c5436961d1aa8e	no	3
Warnings:					
Information:					
3	Non Patent Literature	NPL2-Johnson-Electronic_Direct_Fuel_Injection.pdf	414792 fb1a5b3aa5b1053ee0c5f24678e329b555464f3b	no	17
Warnings:					
Information:					
Total Files Size (in bytes):			16332864		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 14/738,060			
APPLICATION AS FILED - PART I									
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY			
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)		
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	300		N/A			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A			
TOTAL CLAIMS (37 CFR 1.16(i))	26	minus 20 = *	6	x 40 =	240				
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *		x 210 =	0.00				
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				0.00				
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					0.00				
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL	970		
APPLICATION AS AMENDED - PART II									
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total (37 CFR 1.16(i))	*	Minus **	=	x =		x =		
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =		x =		
	Application Size Fee (37 CFR 1.16(s))								
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
TOTAL ADD'L FEE							TOTAL ADD'L FEE		
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total (37 CFR 1.16(i))	*	Minus **	=	x =		x =		
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =		x =		
	Application Size Fee (37 CFR 1.16(s))								
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
TOTAL ADD'L FEE							TOTAL ADD'L FEE		
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.									



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www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO.	TOT CLAIMS	IND CLAIMS
14/738,060	06/12/2015	3747	970	CET1090.019	26	3

CONFIRMATION NO. 9670

FILING RECEIPT



0000000075883212

26629
ZIOLOKOWSKI PATENT SOLUTIONS GROUP, SC (ZPS)
136 S WISCONSIN ST
PORT WASHINGTON, WI 53074

Date Mailed: 06/24/2015

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Mark J. Sarder, Waukesha, WI;
Aleko D. Sotiriades, Cedarburg, WI;
James J. Dehn, Brookfield, WI;
Leigh Jenison, Hartland, WI;

Applicant(s)

Champion Engine Technology, LLC, Sussex, WI;

Power of Attorney: The patent practitioners associated with Customer Number 26629

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 06/22/2015

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/738,060**

Projected Publication Date: 12/15/2016

page 1 of 3

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE

Preliminary Class

123

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	
Filing Date	
First Named Inventor	Mark J. Sarder
Title	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE
Art Unit	
Examiner Name	
Attorney Docket Number	CET1090.019

SIGNATURE of Applicant or Patent Practitioner

Signature	/Timothy J. Ziolkowski/	Date (Optional)	
Name	Timothy J. Ziolkowski	Registration Number	38368
Title (if Applicant is a juristic entity)	Patent Practitioner		
Applicant Name (if Applicant is a juristic entity)	Champion Engine Technology, LLC		
NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.			
☒	*Total of <u>1</u> forms are submitted.		

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☒ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

OR

26629

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☒ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name				
Address				
City	State	Zip		
Country				
Telephone	Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

--

- ☐ Inventor or Joint Inventor (title not required below)
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- ☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	Date (Optional)
Name	Dorance J. Noonan
Title	CEO, Champion Engine Technology, LLC

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☒ Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1480, Alexandria, VA 22313-1480. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1480, Alexandria, VA 22313-1480.

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Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)

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

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Mark J. Sarder et al.	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	CET1090.019	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4502453		1985-03-05	Kabasin et al.	
	2	5171487		1992-12-15	Hudz	
	3	5320078		1994-06-14	Lorraine	
	4	5450832		1995-09-19	Graf	
	5	5673670		1997-10-07	Powell et al.	
	6	6223730	B1	2001-05-01	Hasegawa et al.	
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U.S.PATENT APPLICATION PUBLICATIONS						Remove
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Mark J. Sarder et al.	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	CET1090.019	

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	1		☐

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Examiner Signature		Date Considered	
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*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.

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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Mark J. Sarder et al.	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	CET1090.019	

CERTIFICATION STATEMENT			
Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):			
☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).			
OR			
☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).			
☐ See attached certification statement.			
☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.			
☐ A certification statement is not submitted herewith.			
SIGNATURE			
A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.			
Signature	/Timothy J. Ziolkowski/	Date (YYYY-MM-DD)	2015-06-12
Name/Print	Timothy J. Ziolkowski	Registration Number	38368
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.			

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE		
First Named Inventor/Applicant Name:		Mark J. Sarder		
Filer:		Timothy J. Ziolkowski/Robyn Templin		
Attorney Docket Number:		CET1090.019		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Pages:				
Claims:				
Claims in excess of 20	2202	6	40	240
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				970

Electronic Acknowledgement Receipt	
EFS ID:	22617957
Application Number:	14738060
International Application Number:	
Confirmation Number:	9670
Title of Invention:	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE
First Named Inventor/Applicant Name:	Mark J. Sarder
Customer Number:	26629
Filer:	Timothy J. Ziolkowski/Robyn Templin
Filer Authorized By:	Timothy J. Ziolkowski
Attorney Docket Number:	CET1090.019
Receipt Date:	12-JUN-2015
Filing Date:	
Time Stamp:	15:03:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 970
RAM confirmation Number	1521
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	App-ADS.pdf	1565471	no	8
			23b835fe233595320e4a002a35008ceb2ed8e0e6		
Warnings:					
Information:					
2		App-Body.pdf	132226	yes	26
			28cab543a489fbacaeba1dcb4594b61147d99626		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	19	
	Claims		20	25	
	Abstract		26	26	
Warnings:					
Information:					
3	Oath or Declaration filed	App-Dec.pdf	1265909	no	4
			c028f3708d260161b9549920cd03143206a865		
Warnings:					
Information:					
4	Drawings-only black and white line drawings	App-Drawings.pdf	721565	no	5
			c16886d6452dbd91e547b710acc9fb08ebd49c2		
Warnings:					
Information:					
5	Power of Attorney	POATransmittal.pdf	417641	no	1
			5b0bc0964738bfd58604427dd494eedcbb54180c		
Warnings:					
Information:					
6	Power of Attorney	GeneralPOA.pdf	295414	no	1
			97387954aa8358e4735cbb1132224409b5cd16e56		

Warnings:					
Information:					
7	Information Disclosure Statement (IDS) Form (SB08)	IDS.pdf	612308 dd5cf004515180ed090256aac04b29c88bfc3f32	no	4
Warnings:					
Information:					
8	Fee Worksheet (SB06)	fee-info.pdf	37064 ed03182852278e57cdf93544c3d66274ef4437ac	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			5047598		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	CET1090.019
		Application Number	
Title of Invention	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Mark	J.	Sarder		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Waukesha	State/Province	WI	Country of Residence ⁱ	US
Mailing Address of Inventor:					
Address 1		W245 N5551 Corporate Circle			
Address 2					
City	Sussex	State/Province	WI		
Postal Code	53089	Country ⁱ	US		
Inventor 2					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Aleko	D.	Sotiriades		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Cedarburg	State/Province	WI	Country of Residence ⁱ	US
Mailing Address of Inventor:					
Address 1		W245 N5551 Corporate Circle			
Address 2					
City	Sussex	State/Province	WI		
Postal Code	53089	Country ⁱ	US		
Inventor 3					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	James	J.	Dehn		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	CET1090.019	
		Application Number		
Title of Invention	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE			

City	Brookfield	State/Province	WI	Country of Residence i	US
------	------------	----------------	----	------------------------	----

Mailing Address of Inventor:

Address 1	W245 N5551 Corporate Circle				
Address 2					
City	Sussex	State/Province	WI		
Postal Code	53089	Country i	US		

Inventor 4	Remove
Legal Name	

Prefix	Given Name	Middle Name	Family Name	Suffix
	Leigh		Jenison	

Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service

City	Hartland	State/Province	WI	Country of Residence i	US
------	----------	----------------	----	------------------------	----

Mailing Address of Inventor:

Address 1	W245 N5551 Corporate Circle				
Address 2					
City	Sussex	State/Province	WI		
Postal Code	53089	Country i	US		

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button.

[Add](#)**Correspondence Information:**

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
☐ An Address is being provided for the correspondence information of this application.	
Customer Number	26629
Email Address	Add Email Remove Email

Application Information:

Title of the Invention	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE		
Attorney Docket Number	CET1090.019	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)		Suggested Figure for Publication (if any)	

Filing By Reference :

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	CET1090.019
	Application Number	
Title of Invention	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE	

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐ Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.			
Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	26629		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the application number blank.

Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			Add

EFS Web 2.2.11

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	CET1090.019
		Application Number	
Title of Invention	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE		

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).			
			Remove
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ^j (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐	This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.
--------------------------	--

Authorization to Permit Access:

☒	Authorization to Permit Access to the Instant Application by the Participating Offices
-------------------------------------	--

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	CET1090.019
		Application Number	
Title of Invention	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE		

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.			
Applicant 1			Remove
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.			
Clear			
☒ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor	
☐ Person to whom the inventor is obligated to assign.		☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
Name of the Deceased or Legally Incapacitated Inventor :			
If the Applicant is an Organization check here. ☒			
Organization Name	Champion Engine Technology, LLC		
Mailing Address Information:			
Address 1	W245 N5551 Corporate Circle		
Address 2			
City	Sussex	State/Province	WI
Country ⁱ	US	Postal Code	53089
Phone Number		Fax Number	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	CET1090.019
		Application Number	
Title of Invention	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE		
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button. Add			

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.				
Assignee 1				
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
				Remove
If the Assignee or Non-Applicant Assignee is an Organization check here. ☐				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country i		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				Add

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications					
Signature	/Timothy J. Ziolkowski/			Date (YYYY-MM-DD)	2015-06-12
First Name	Timothy J.	Last Name	Ziolkowski	Registration Number	38368
Additional Signature may be generated within this form by selecting the Add button.					Add

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	CET1090.019
		Application Number	
Title of Invention	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE

BACKGROUND OF THE INVENTION

[0001] Embodiments of the invention relate generally to dual fuel generators, and more particularly, to an apparatus and method for delivering liquid fuel and gaseous fuel to a dual fuel generator.

[0002] Electric generators are frequently driven by internal combustion engines that use gasoline as a fuel source. Gasoline is a common fuel source for generators in a variety of applications. However, alternative fuel sources also provide a desirable fuel source. For instance, alternative fuels may provide a clean burning fuel that limits hazardous emissions. Alternative fuels may also be stored for long periods of time without degradation, whereas gasoline can degrade over a period of months leading to hard starting, rough running, and also lead to gum and varnish deposit left in the fuel system. In addition, generators that operate on alternative fuels may generate electricity when gasoline is not readily available. For instance, generators are frequently used when power outages in the utility grid result from severe weather. Unfortunately, gas stations may also be closed as a result of the power outage. Such a circumstance presents just one example where it would be advantageous to operate electrical generators on alternative fuels.

[0003] Certain generators are configured to operate as “dual fuel” generators, otherwise known as bi-fuel generators. These generators are driven by an internal combustion engine that is configured to operate on a liquid fuel for a period of operation and an alternative fuel for another period of operation. The alternative fuel source may exist in a gaseous state at normal temperature and pressure and can be any one of liquefied petroleum gas, compressed natural gas, hydrogen, or the like. Liquefied petroleum gas (LPG), often referred to as propane, exists in a gaseous state at normal temperature and pressure but can be conveniently stored under pressure in a liquid state. LPG may be a desirable fuel source for internal combustion engines because it can be stored for longer periods of time and contains fewer impurities than gasoline, resulting in smoother and cleaner operation, and often resulting in a longer lasting engine.

[0004] In order to provide the liquid and gaseous fuel to the engine, the dual fuel engine may have a first fuel line for liquid fuel and a second fuel line for gaseous fuel. A liquid fuel source and a gaseous fuel source may be coupled to the respective lines to provide fuel to the engine. However, a common problem with such configurations that couple two fuel sources to a single engine is the engine can experience overly rich air-fuel ratio when both fuels are simultaneously engaged during cross-over switching between the fuel sources. Further, such simultaneous delivery of fuel from the first fuel line and the second fuel line may make the engine hard to start or lead to unstable operating conditions.

[0005] Therefore, it would be desirable to design a dual fuel generator having a liquid fuel and gaseous fuel delivery system that overcomes the aforementioned detriments without substantially increasing the overall cost of the system.

BRIEF DESCRIPTION OF THE INVENTION

[0006] In accordance with one aspect of the invention, a mechanical fuel lockout switch for a dual fuel engine provides for the selection of a desired fuel to operate the engine. The mechanical fuel lockout switch includes a mechanical fuel valve and a fuel lockout apparatus. The mechanical fuel valve actuates between a first position and a second position to selectively control fuel flow to the dual fuel engine from a first fuel source through a first fuel line and a second fuel source through a second fuel line. The fuel lockout apparatus couples to the mechanical fuel valve ensuring individual communication of the fuel sources to the engine. The mechanical fuel lockout switch communicates the first fuel source to the dual fuel engine and prevents communication between the second fuel source and the dual fuel engine when the mechanical fuel valve is in the first position, and communicates the second fuel source to the dual fuel engine and interrupts the first fuel source communication with the dual fuel engine when in the second position.

[0007] In accordance with another aspect of the invention, a dual fuel generator and fuel delivery system includes a dual fuel generator configured to operate on a liquid fuel supplied from a liquid fuel source through a liquid fuel line and a gaseous fuel supplied from a pressurized fuel source through a gaseous fuel line. The dual fuel generator and fuel delivery system also includes a fuel regulator system located off board the dual fuel generator to control the pressure of fuel from the pressurized fuel source and deliver the fuel at a desired pressure for operation of the generator. The fuel regulator system includes a primary pressure regulator coupled to a service valve of the pressurized fuel source and configured to regulate the fuel supplied from the pressurized fuel source to a reduced pressure. The fuel regulator system also includes a secondary pressure regulator coupled to the primary pressure regulator and configured to regulate the gaseous fuel supplied from the primary pressure regulator to a desired pressure for delivery through the gaseous fuel line to operate the dual fuel generator. The dual fuel generator and fuel delivery system further includes a mechanical fuel valve actuateable between a first position and a second position to selectively control fuel flow to the dual

fuel generator from the liquid fuel source through the liquid fuel line and the pressurized fuel source through the gaseous fuel line.

[0008] In accordance with yet another aspect of the invention, a method of assembling a mechanical fuel lockout switch for an internal combustion engine includes providing an internal combustion engine configured to operate on a fuel from a first fuel source and a different fuel from a second fuel source. The method also includes coupling a mechanical fuel valve to the internal combustion engine actuatable between a first position and a second position to selectively control fuel flow to the internal combustion engine from the first fuel source through a first fuel line and the second fuel source through a second fuel line. The method further includes coupling a fuel lockout apparatus to the mechanical fuel valve. When the mechanical fuel valve is in the first position, the fuel lockout apparatus communicates the first fuel source to the internal combustion engine and prevents the second fuel source from coupling to the internal combustion engine, and actuation of the mechanical fuel valve to the second position causes the fuel lockout apparatus to permit the second fuel source to couple to the internal combustion engine, and interrupts the first fuel source communication with the internal combustion engine.

[0009] Various other features and advantages will be made apparent from the following detailed description and the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The drawings illustrate preferred embodiments presently contemplated for carrying out the invention.

[0011] In the drawings:

[0012] FIG. 1 is a perspective view of a dual fuel generator coupled to a fuel delivery system, according to an embodiment of the invention.

[0013] FIG. 2 is a detail view of a portion of the generator of FIG. 1 about a mechanical fuel lockout switch with the switch in a first position, according to an embodiment of the invention.

[0014] FIG. 3 is a detail view similar to FIG. 2 and showing the mechanical fuel lockout switch in a second position, with an LPG supply line connected thereto, according to an embodiment of the invention.

[0015] FIG. 4A is a schematic diagram of a fuel system for the dual fuel generator of FIG. 1 showing a liquid fuel source in communication with a carburetor of the generator consistent with the first position of the switch as shown in FIG. 2, according to an embodiment of the invention.

[0016] FIG. 4B is a schematic diagram of the fuel system of FIG. 4A showing a gaseous fuel source in communication with a carburetor of the generator of FIG. 1 consistent with the second position of the switch as shown in FIG. 3, according to an embodiment of the invention.

[0017] FIG. 5 is a perspective view of a fuel delivery system for the dual fuel generator of FIG. 1, according to an embodiment of the invention.

[0018] FIG. 6 is a side view of a fuel delivery system for the dual fuel generator of FIG. 1, according to an embodiment of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0019] The operating environment of the invention is described with respect to a dual fuel generator. However, it will be appreciated by those skilled in the art that the invention is equally applicable for use with any dual fuel internal combustion engine. Moreover, the invention will be described with respect to a dual fuel generator configured to operate on a liquid fuel and a gaseous fuel. However, one skilled in the art will further appreciate that the invention is equally applicable for use with other fuel combinations for dual fuel generators and internal combustion engines.

[0020] Referring to FIG. 1, a dual fuel generator 20 is coupled to a fuel delivery system 22, in accordance with an embodiment of the invention. Dual fuel generator 20 includes an internal combustion engine (not shown) within housing 21 at one end 24, operatively connected to an alternator also enclosed in housing 21 at another end 26, by conventional means. Dual fuel generator 20 is configured to operate on different fuels via either a first fuel source 28 or a second fuel source 30. In an exemplary embodiment of the invention, first fuel source 28 is a liquid fuel and second fuel source 30 is a gaseous fuel. The liquid fuel may be gasoline and the gaseous fuel may be liquid petroleum gas (LPG). Each can selectively operate the generator as desired and controlled by an operator. For instance, generator 20 may operate on gasoline for a first period of operation and then switch to LPG for a second period of operation. However, it is contemplated that dual fuel generator 20 is configured to operate on fuels other than gasoline and LPG (e.g., natural gas, biodiesel, etc.), and thus the scope of the invention is not meant to be limited strictly to a dual fuel arrangement where first fuel source 28 provides gasoline and second fuel source 30 provides LPG.

[0021] In one embodiment of the invention, dual fuel generator 20 includes a gasoline tank 32 or, generally, a liquid fuel tank, located inside cover 21 onboard generator 20 to provide gasoline to the engine as first fuel source 28. Gasoline tank 32 connects to a first fuel line to provide gasoline to the carburetor to run the engine, as will later be described with reference to FIG. 4A and 4B. Generator 20 is also coupled to a pressurized fuel container 34, or a pressurized fuel source, located off board

generator 20 to provide LPG to the engine as second fuel source 30. Pressurized fuel container 34 is coupled to generator 20 with an LPG supply hose 36. LPG supply hose 36 is coupled to a second fuel line within generator 20 to provide LPG to the carburetor to run the engine. Dual fuel generator 20 includes a mechanical fuel lockout switch 38 for selecting a desired fuel to be provided to the engine. The mechanical fuel lockout switch 38 is actuated to select first fuel source 28 when in a first position, as shown in FIG. 2, and alternately to select second fuel source 30 when in a second position, as shown in FIG. 3.

[0022] Referring back to FIG. 1, in an exemplary embodiment, fuel 30 from pressurized fuel container 34 is regulated using a fuel regulator system 39 for delivery to the engine. Fuel regulator system 39 includes one or more pressure regulators that reduce and control the pressure of the fuel from pressurized fuel container 34 and delivers fuel at a desired pressure for operation of the engine. Fuel regulator system 39 has an inlet 41 operatively coupled to a service valve 40 of pressurized fuel container 34 and an outlet 43 coupled to LPG supply hose 36. Fuel regulator system 39 includes a primary pressure regulator 42 coupled to pressurized fuel container 34 and a secondary pressure regulator 44. Primary pressure regulator 42 protects downstream components from high pressure of pressurized fuel container 34. Primary pressure regulator 42 receives LPG through service valve 40 of pressurized fuel container 34 and reduces the pressure of the LPG to a first stage. In one embodiment of the invention, the first stage may be delivered directly to generator 20 at a pressure required for operation of the engine.

[0023] In an exemplary embodiment of the invention, fuel regulator system 39 includes secondary pressure regulator 44 coupled to the outlet of primary pressure regulator 42 in order to use standard “off-the-shelf” components. Typically, the primary pressure regulator is mounted on the LPG tank, while the secondary pressure regulator is mounted on the component using the fuel, such as an engine or grill. Here, since generator 20 can be used as a gasoline only generator, secondary pressure regulator 44 is mounted off-board the generator to reduce size and cost of the generator. Secondary pressure regulator 44 receives LPG from primary pressure regulator 42 and further

reduces the pressure of LPG to a second stage to be delivered to generator 20. In a system with two regulators, primary pressure regulator 42 regulates fuel received from pressurized fuel container 34 and reduces the pressure of the fuel to a level required for operation of secondary pressure regulator 44. Secondary pressure regulator 44 regulates fuel received from primary pressure regulator 42 and further reduces the pressure of the fuel to a level required for operation of generator 20. In addition, primary pressure regulator 42 may compensate for varying tank pressure as fuel is depleted while secondary pressure regulator 44 may compensate for varying demand from generator 20.

[0024] In accordance with an exemplary embodiment of the invention, fuel regulator system 39 includes both the primary and secondary regulators, or a custom single regulator, but in any case is located remotely, or off-board, from dual fuel generator 20. Fuel regulator system 39 may be directly mounted to pressurized fuel container 34 using a regulator mounting bracket 46. Regulator mounting bracket 46 has mounting locations for primary pressure regulator 42 and secondary pressure regulator 44. Regulator mounting bracket 46 also has a securing mechanism 48 to secure regulator mounting bracket 46 to pressurized fuel container 34.

[0025] In another embodiment of the invention, primary pressure regulator 42 is mounted on regulator mounting bracket 46 while secondary pressure regulator 44 could be mounted on or near generator 20. In yet another embodiment of the invention, a dual stage regulator may regulate the fuel received from pressurized fuel container 34 and deliver fuel at a pressure required for operation of generator 20. Such a dual stage regulator may regulate the fuel to the second stage within a single structure. The dual stage regulator may be mounted directly on fuel container 34.

[0026] Referring to FIG. 2, a detail view of a portion of generator 20 of FIG. 1 depicts mechanical fuel lockout switch 38 in a first position 38(a), in accordance with an embodiment of the invention. In this position, mechanical fuel lockout switch 38 provides gasoline flow from gasoline tank 32 to the engine while preventing connection of an LPG supply line to fuel inlet 59 of the second fuel line, as will later be discussed

in detail with reference to FIGS. 4A and 4B. Still referring to FIG. 2, mechanical fuel lockout switch 38 provides a combination liquid fuel shutoff valve and a gaseous fuel supply lockout that prevents simultaneous delivery of fuel to the engine from gasoline tank 32 and pressurized fuel container 34, FIG. 1. As such, mechanical fuel lockout switch 38 provides a fuel selector to ensure only the selected fuel is provided to dual fuel generator 20.

[0027] Mechanical fuel lockout switch 38, FIG. 2, includes mechanical fuel valve 54 actuatable between first position 38(a) as shown in FIG. 2 and second position 38(b) as shown in FIG. 3 to selectively control fuel flow to the dual fuel engine from first fuel source 28 through a first fuel line and second fuel source 30 through a second fuel line 36. Mechanical fuel lockout switch 38 may also include fuel lockout apparatus 58 coupled to mechanical fuel valve 54 to communicate fuel sources individually to generator 20. In one embodiment of the invention, fuel lockout apparatus 58 communicates first fuel source 28 to the engine by actuating mechanical fuel valve 54 to first position 38(a) to open the first fuel line as shown in FIG. 2, and communicates second fuel source 30 to the engine by actuating mechanical fuel valve 54 to second position 38(b) to open communication of the second fuel source 30 to the engine as shown in FIG. 3. Referring back to FIG. 2, when mechanical fuel valve 54 is in first position 38(a), fuel lockout apparatus 58 communicates first fuel source 28 to the dual fuel engine and prevents communication between the second fuel source and the dual fuel engine.

[0028] In an exemplary embodiment of the invention, mechanical fuel valve 54 controls the flow of LPG to the engine by actuating fuel lockout apparatus 58 to block or unblock fuel inlet 59 for the second fuel source. Mechanical fuel valve 54 is coupled to the first fuel line, as shown in FIGS. 4A and 4B, and therefore can control the flow of gasoline to the engine by opening and closing the first fuel line. When the mechanical fuel valve 54, FIG. 2, is in the first position 38(a), gasoline flows from the gasoline tank to the engine and the fuel lockout apparatus 58 blocks the fuel inlet 59. Accordingly, fuel lockout apparatus 58 prevents LPG flow to generator 20 when the mechanical fuel valve 54 is in first position 38(a) wherein the engine is operated on gasoline.

[0029] Mechanical fuel valve 54 includes a fuel valve handle 56 to control the opening and closing of the valve. Fuel valve handle 56 is movable between first position 38(a) as shown in FIG. 2 and second position 38(b) as shown in FIG. 3. Mechanical fuel valve 54 opens the first fuel line (to enable liquid fuel flow to the engine) when fuel valve handle 56 is in the first position, and mechanical fuel valve 54 closes the first fuel line (to prevent liquid fuel flow to the engine) when fuel valve handle 56 is in the second position. Thus, when fuel valve handle 56 is in first position 38(a) as shown in FIG. 2, mechanical fuel valve 54 opens the first fuel line and allows gasoline from gasoline tank 32 to flow to the engine.

[0030] Fuel valve handle 56 is coupled to fuel lockout apparatus 58. Fuel valve handle 56 actuates with fuel lockout apparatus 58 to prevent LPG flow to generator 20 when gasoline flow to the generator is enabled. Fuel lockout apparatus 58 is controlled by fuel valve handle 56 so that moving fuel valve handle 56 to the first position causes fuel lockout apparatus 58 to block fuel inlet 59 for LPG, and moving fuel valve handle 56 to the second position causes fuel lockout apparatus 58 to unblock fuel inlet 59 for LPG.

[0031] In an exemplary embodiment of the invention, fuel valve handle 56 rotates between the first position and the second position and fuel lockout apparatus 58 is rigidly coupled to the rotating handle. Fuel lockout apparatus 58 may include a fuel inlet cover 61, which may be a flange, coupled to fuel valve handle 56 so that fuel inlet cover 61 rotates with the handle. Fuel inlet cover 61 extends radially outward from fuel valve handle 56 and sweeps over fuel inlet 59 for LPG as fuel valve handle 56 rotates. That is, fuel inlet cover 61 rotates transversely across fuel inlet 59 and blocks access thereto. Accordingly, fuel inlet cover 61 prevents LPG flow to generator 20 when fuel valve handle 56 is in first position 38(a) to allow gasoline to run the engine.

[0032] Referring to FIG. 3, a detail view of a portion of generator 20 of FIG. 1 depicts mechanical fuel lockout switch 38 in a second position 38(b), in accordance with an embodiment of the invention. In this position, the mechanical fuel lockout switch 38 provides a disconnect to stop gasoline flow from gasoline tank 32 to the

engine while allowing connection of LPG supply hose 36 to fuel inlet 59 of the second fuel line. FIG. 3 further shows LPG supply hose 36 coupling second fuel source 30 to generator 20 to deliver LPG to run the generator.

[0033] Mechanical fuel lockout switch 38 includes mechanical fuel valve 54 coupled to fuel lockout apparatus 58 to prevent gasoline flow to generator 20 when LPG from the LPG service hose 36 is supplied to the engine. In one embodiment of the invention, actuation of mechanical fuel valve 54 to second position 38(b) causes fuel lockout apparatus 58 to allow communication of second fuel source 30 to the dual fuel engine, and interrupts the first fuel source 28 communication with the dual fuel engine. The position of fuel lockout apparatus 58 prevents the fuel valve handle 56 from moving to first position 38(a) (FIG. 2) while LPG supply hose 36 is connected to generator 20.

[0034] A quick-disconnect hose coupling 50, also referred to as a quick-connect hose coupling, connects LPG supply hose 36 to generator 20 so that LPG supply hose 36 may be quickly attached and detached from generator 20. Hose coupling 50 has a first end 50a mounted on the external surface of generator 20 and coupled to supply the second fuel to the engine. Hose coupling 50 has a second end 50b coupled to the outlet of LPG supply hose 36. Hose coupling 50 has a valve that opens when the couplings are engaged and closes when the couplings are disengaged. As such, quick-disconnect hose coupling 50 automatically opens when connected to enable fuel flow from LPG supply hose 36 to the engine. Hose coupling 50 automatically disconnects fluid communication when disconnected. Accordingly, when the supply hose is detached from generator 20, the coupling 50 is automatically closed so that fuel does not escape and unwanted air does not enter the fuel system.

[0035] In one embodiment, fuel inlet cover 61 is coupled to fuel valve handle 56 so that it is spaced apart from the surface of generator 20 to provide clearance for first end 50a of the quick-disconnect hose coupling 50 that protrudes from the surface of generator 20. As shown in FIG. 2, fuel inlet cover 61 blocks off first end 50a of the quick-disconnect hose coupling when fuel valve handle 56 is rotated to first position 38(a) to enable gasoline flow so that fuel inlet cover 61 prevents connection of LPG

supply hose 36 (FIG. 3) to generator 20. As shown in FIG. 3, fuel inlet cover 61 uncovers first end 50a of the quick-disconnect hose coupling 50 when fuel valve handle 56 is rotated to second position 38(b) to disable gasoline flow so that fuel inlet cover 61 permits connection of LPG supply hose 36 to generator 20.

[0036] To operate generator 20 on LPG, fuel valve handle 56 is turned to second position 38(b) to disable the flow of gasoline to the engine and to expose first end 50a of hose coupling 50 on generator 20. LPG supply hose 36 is then connected to generator 20 via hose coupling 50 to enable the flow of LPG to the engine. To operate generator 20 on gasoline, LPG supply hose 36 is disconnected from generator 20 via hose coupling 50 to disable the flow of LPG to the engine and to unblock fuel valve handle 56 from rotating to the first position. As shown in FIG. 2, fuel valve handle 56 is then turned to first position 38(a) to enable the flow of gasoline to generator 20.

[0037] Referring to FIG. 4A, a schematic diagram of a fuel system for a dual fuel engine shows mechanical fuel lockout switch 38 in first position 38(a) to provide communication between the first fuel source 28 and dual fuel carburetor 62, according to an embodiment of the invention. Mechanical fuel lockout switch 38 prevents communication between second fuel source 30 and dual fuel carburetor 62 when the switch is in first position 38(a). In one embodiment of the invention, first fuel source 28 includes a gasoline tank 32 to provide gasoline to carburetor 62 through a first fuel line 66, and second fuel source 30 includes a propane or LPG tank 68 to provide propane or LPG to carburetor 62 through a second fuel line 70. Accordingly, first fuel line 66 may be a liquid fuel line and second fuel line 70 may be a gaseous fuel line.

[0038] Mechanical fuel lockout switch 38 includes a mechanical fuel valve 54 actuatable between first position 38(a) as shown in FIG. 4A and second position 38(b) as shown in FIG. 4B to selectively control fuel flow to the dual fuel engine from first fuel source 28 through first fuel line 66 and second fuel source 30 through second fuel line 70. Referring back to FIG. 4A, mechanical fuel valve 54 selectively controls fuel flow through first fuel line 66 by opening the line when the mechanical fuel lockout switch 38 actuates to first position 38(a). Mechanical fuel valve 54 may be coupled to

fuel lockout apparatus 58 that actuates with mechanical fuel valve 54 to block and unblock fuel inlet 59 of second fuel line 70. First end 50a of the quick-disconnect hose coupling is located at fuel inlet 59 and a mating end 50b of the quick-disconnect hose coupling is coupled to the propane or LPG tank 68. Actuation of mechanical fuel valve 54 to first position 38(a) causes fuel lockout apparatus 58 to block fuel inlet 59 to prevent coupling the first end 50a and second end 50b of the quick-disconnect hose coupling together, and actuation of mechanical fuel valve 54 to another position causes fuel lockout apparatus 58 to unblock fuel inlet 59 to permit attaching first end 50a and second end 50b together.

[0039] In one embodiment of the invention, a fuel cut solenoid 63 couples to carburetor 62 to regulate liquid fuel flow into a main nozzle within the carburetor. Fuel cut solenoid 63 is advantageous to control liquid fuel flow downstream of a float bowl in the carburetor and can stop fuel flow to the engine immediately after ignition shutdown. As such, fuel cut solenoid 63 prevents the engine from drawing in fuel from the float bowl while the engine shuts off. Fuel cut solenoid 63 also traps fuel in the float bowl to eliminate delay in filling the bowl when starting the engine on liquid fuel, and prevents liquid fuel flow from the float bowl to the engine when starting on gaseous fuel.

[0040] Fuel cut solenoid 63 may regulate fuel flow through multiple fuel lines in carburetor 62 that provide fuel from the float bowl to the engine. For instance, carburetor 62 may have a main fuel line and an idle fuel line that receive fuel from the float bowl. Fuel cut solenoid 63 may control fuel flow through all of the fuel lines that receive fuel from the float bowl or may regulate only some of the fuel lines. As such, fuel cut solenoid 63 may block fuel flow through the main fuel line while small amounts of fuel can flow through the idle fuel line.

[0041] Fuel cut solenoid 63 preferably operates as a normally closed valve that opens when powered by a 12 volt battery 65, although fuel cut solenoid 63 may also be operated as a normally open valve. The normally closed valve is opened for gasoline mode to allow gasoline flow to the engine and closed for LPG mode to prevent gasoline

flow to the engine. Fuel cut solenoid 63 is operated by an electrical switch 67 which may be mechanically actuated and controlled by mechanical fuel lockout switch 38. As such, actuation of mechanical fuel lockout switch 38 to first position 38(a) closes electrical switch 67 to power and open fuel cut solenoid 63 as represented in FIG. 4A, and actuation of mechanical fuel lockout switch 38 to second position 38(b) opens electrical switch 67 to interrupt power and close fuel cut solenoid 63 as represented in FIG. 4B.

[0042] Referring to FIG. 4B, a schematic diagram of a fuel system for a dual fuel engine shows mechanical fuel lockout switch 38 in second position 38(b) to provide communication between second fuel source 30 and dual fuel carburetor 62, according to an embodiment of the invention. Mechanical fuel lockout switch 38 prevents communication between first fuel source 28 and dual fuel carburetor 62 when the switch is in second position 38(b). The dual fuel engine has a first fuel line 66 to provide fuel from first fuel source 28 to carburetor 62 and a second fuel line 70 to provide fuel from second fuel source 30 to carburetor 62.

[0043] Mechanical fuel lockout switch 38 includes mechanical fuel valve 54 that selectively controls fuel flow through first fuel line 66 by closing the line when mechanical fuel lockout switch 38 actuates to second position 38(b). Mechanical fuel lockout switch 38 may also include a mechanical lockout apparatus 58 to block and unblock fuel inlet 59 of the second fuel line 70. Fuel inlet 59 may include first end 50a of the quick-connect hose coupling mounted on the generator and coupled to second fuel line 70. Second end 50b of the quick-connect hose coupling is coupled to the outlet of second fuel source 30, and the first end 50a mates with second end 50b to quickly attach propane or LPG tank 68 to second fuel line 70. Fuel lockout apparatus 58 may also hold mechanical fuel lockout switch 38 in second position 38(b) when the propane or LPG tank 68 is coupled to the engine via the ends 50a, 50b of the quick-connect hose coupling.

[0044] Fuel cut solenoid 63 couples to carburetor 62 to regulate liquid fuel flow through the carburetor as described with respect to FIG. 4A. FIG. 4B shows electrical

switch 67 opened to interrupt power and close fuel cut solenoid 63 for LPG mode when mechanical fuel lockout switch 38 is in second position 38(b).

[0045] FIG. 4A and 4B depict an embodiment where mechanical fuel valve 54 operates along first fuel line 66 to provide a flow path for first fuel source 28 to carburetor 62 when the valve is in first position 38(a). That is, mechanical fuel valve 54 may control a single fuel line that runs through the valve while operating fuel lockout apparatus 58 to control fuel flow through second fuel line 70. Embodiments of the invention also contemplate mechanical fuel valve 54 configured to operate along second fuel line 70 to provide a flow path for second fuel source 30 to carburetor 62 when the valve is in second position 38(b). Mechanical fuel valve 54 may be configured to control multiple fuel lines that run through the valve according to embodiments of the invention.

[0046] Referring now to FIG. 5, a perspective view of fuel delivery system 22 for dual fuel generator 20 of FIG. 1 is shown, in accordance with an embodiment of the invention. Fuel delivery system 22 includes a mounting arrangement for fuel regulator system 39. The mounting arrangement includes regulator mounting bracket 46 for mounting fuel regulator system 39. Regulator mounting bracket 46 extends around the outer periphery of collar 136 on pressurized fuel container 34. Regulator mounting bracket 46 has securing mechanism 48 to secure to collar 136. In one embodiment, securing mechanism 48 is a rigid component that extends inward from regulator mounting bracket 46 with a slot for receiving collar 136 to hold regulator mounting bracket 46 to collar 136.

[0047] Regulator mounting bracket 46 provides mounting locations for pressure regulators. In one embodiment, regulator mounting bracket 46 is made of sheet metal bent in two locations to provide a central panel 138, a first outer panel 140, and a second outer panel 142 for mounting the regulators. The panels may be angled from each other such that regulator mounting bracket 46 fits around collar 136. Primary pressure regulator 42 mounts on first outer panel 140 and secondary pressure regulator 44 mounts on second outer panel 142. The panels are sized according to their respective

regulators. Accordingly, second outer panel 142 is larger than first outer panel 140 if secondary pressure regulator 44 is larger than primary pressure regulator 42. Panels 140, 142 have fasteners or openings to receive fasteners to couple respective regulators 42, 44 to the panels. Regulator mounting bracket 46 rests on top of pressurized fuel container 34 and engages the periphery of collar 136 to support fuel regulator system 39 on the container.

[0048] In one embodiment of the invention, primary pressure regulator 42 couples to two ninety degree elbows 144, 145 to reach around collar 136 in order to couple to service valve 40. The two elbows 144, 145 are joined by a hose or pipe 146 that leads from elbow 144 at service valve 40 to elbow 145 at the outer periphery of collar 136. The outlet of primary pressure regulator 42 couples to a hose 148 that extends to another ninety degree elbow 150 coupled to the inlet of secondary pressure regulator 44. Secondary pressure regulator 44 couples to LPG supply hose 36. Pressurized fuel container 34 may be strapped to a dolly 152.

[0049] Referring now to FIG. 6, a side view of another fuel delivery system 22 for dual fuel generator 20 of FIG. 1 is shown, in accordance with an embodiment of the invention. Fuel delivery system 22 includes a mounting arrangement for fuel regulator system 39. The mounting arrangement includes a regulator mounting structure 154 for mounting fuel regulator system 39 to pressurized fuel container 34. Regulator mounting structure 154 includes a cylinder 156 that surrounds the circumference of pressurized fuel container 34 to secure regulator mounting structure 154 radially along the circumference of pressurized fuel container 34. Cylinder 156 couples to a dome 158 to support cylinder 156 relative to the top of pressurized fuel container 34. Dome 158 has a central opening 160 through which collar 136 of pressurized fuel container 34 extends. Collar 136 of pressurized fuel container 34 extends through dome 158 so that service valve 40 is easily accessible from above regulator mounting structure 154 and so that dome 158 sits on pressurized fuel container 34 around collar 136.

[0050] Regulator mounting structure 154 supports pressure regulators around the outer circumference of cylinder 156. In some embodiments of the invention, a dual

stage pressure regulator 162 functions as both a primary pressure regulator and a secondary pressure regulator in a single integral component, and dual stage pressure regulator 162 may be mounted on regulator mounting structure 154. In other embodiments in of the invention, primary pressure regulator 42 (FIG. 5) is mounted to service valve 40 while secondary pressure regulator 44 (FIG. 5) is mounted on regulator mounting structure 154. Alternatively, both primary pressure regulator 42 (FIG. 5) and secondary pressure regulator 44 (FIG. 5) may be mounted on regulator mounting structure 154.

[0051] Fuel regulator system 39 may be coupled to service valve 40 by a flexible connector called a pigtail 164. Pigtail 164 absorbs shock in the system from pressure surges and from movement of downstream components. Pigtail 164 can be looped to conserve space and therefore pressurized fuel container 34 is referred to as an LPG pig. Accordingly, regulator mounting structure 154 is referred to as a pig hat because it fits on the LPG pig. Pressurized fuel container 34 may be secured to a platform or mobile cart 64 for stability or transportation. In another embodiment, a regulator mounting device, including regulator mounting structure 154 or regulator mounting bracket 46 (FIG. 5), is secured directly to a platform or a mobile cart.

[0052] Beneficially, embodiments of the invention provide for a mechanical fuel lockout switch to ensure that two fuels are not simultaneously delivered to a dual fuel internal combustion engine. Embodiments of the invention also provide for a dual fuel generator with a remotely mounted gaseous fuel regulator system.

[0053] Therefore, according to one embodiment of the invention, a mechanical fuel lockout switch for a dual fuel engine includes a mechanical fuel valve actuateable between a first position and a second position to selectively control fuel flow to the dual fuel engine from a first fuel source through a first fuel line and a second fuel source through a second fuel line. The mechanical fuel lockout switch also includes a fuel lockout apparatus coupled to the mechanical fuel valve. The mechanical fuel lockout switch communicates the first fuel source to the dual fuel engine and prevents communication between the second fuel source and the dual fuel engine when the

mechanical fuel valve is in the first position, and communicates the second fuel source to the dual fuel engine and interrupts the first fuel source communication with the dual fuel engine when in the second position.

[0054] According to another embodiment of the invention, a dual fuel generator and fuel delivery system includes a dual fuel generator configured to operate on a liquid fuel supplied from a liquid fuel source through a liquid fuel line and a gaseous fuel supplied from a pressurized fuel source through a gaseous fuel line. The dual fuel generator and fuel delivery system also includes a fuel regulator system located off board the dual fuel generator. The fuel regulator system includes a primary pressure regulator coupled to a service valve of the pressurized fuel source and configured to regulate the fuel supplied from the pressurized fuel source to a reduced pressure. The fuel regulator system also includes a secondary pressure regulator coupled to the primary pressure regulator and configured to regulate the gaseous fuel supplied from the primary pressure regulator to a desired pressure for delivery through the gaseous fuel line to operate the dual fuel generator. The dual fuel generator and fuel delivery system further includes a mechanical fuel valve actuateable between a first position and a second position to selectively control fuel flow to the dual fuel generator from the liquid fuel source through the liquid fuel line and the pressurized fuel source through the gaseous fuel line.

[0055] According to yet another embodiment of the invention, a method of assembling a mechanical fuel lockout switch for an internal combustion engine includes providing an internal combustion engine configured to operate on a fuel from a first fuel source and a different fuel from a second fuel source. The method also includes coupling a mechanical fuel valve to the internal combustion engine actuateable between a first position and a second position to selectively control fuel flow to the internal combustion engine from the first fuel source through a first fuel line and the second fuel source through a second fuel line. The method further includes coupling a fuel lockout apparatus to the mechanical fuel valve. When the mechanical fuel valve is in the first position, the fuel lockout apparatus communicates the first fuel source to the internal combustion engine and prevents the second fuel source from coupling to the internal combustion engine, and actuation of the mechanical fuel valve to the second position

causes the fuel lockout apparatus to permit the second fuel source to couple to the internal combustion engine, and interrupts the first fuel source communication with the internal combustion engine.

[0056] This written description uses examples to disclose the invention, including the best mode, and also to enable any person skilled in the art to practice the invention, including making and using any devices or systems and performing any incorporated methods. The patentable scope of the invention is defined by the claims, and may include other examples that occur to those skilled in the art. Such other examples are intended to be within the scope of the claims if they have structural elements that do not differ from the literal language of the claims, or if they include equivalent structural elements with insubstantial differences from the literal languages of the claims.

CLAIMS

What is claimed is:

1. A mechanical fuel lockout switch for a dual fuel engine comprising:
a mechanical fuel valve actuatable between a first position and a second position to selectively control fuel flow to the dual fuel engine from a first fuel source through a first fuel line and a second fuel source through a second fuel line; and
a fuel lockout apparatus coupled to the mechanical fuel valve;
wherein the mechanical fuel lockout switch:
communicates the first fuel source to the dual fuel engine and prevents communication between the second fuel source and the dual fuel engine when the mechanical fuel valve is in the first position, and
communicates the second fuel source to the dual fuel engine and interrupts the first fuel source communication with the dual fuel engine when in the second position.
2. The mechanical fuel lockout switch for a dual fuel engine of claim 1, wherein the fuel lockout apparatus prevents actuation of the mechanical fuel valve to the first position when the second fuel source communicates with the dual fuel engine.
3. The mechanical fuel lockout switch for a dual fuel engine of claim 1, wherein the fuel lockout apparatus is configured to:
prevent the second fuel source from coupling to the second fuel line while the mechanical fuel valve is in the first position; and
permit the second fuel source to couple to the second fuel line while the mechanical fuel valve is in the second position.
4. The mechanical fuel lockout switch for a dual fuel engine of claim 3, wherein the fuel lockout apparatus comprises a flange rigidly coupled to the mechanical fuel valve that covers an inlet of the second fuel line while the mechanical fuel valve is

in the first position and uncovers the inlet of the second fuel line while the mechanical fuel valve is in the second position.

5. The mechanical fuel lockout switch for a dual fuel engine of claim 4, wherein the mechanical fuel valve rotates between the first position and the second position and the flange rotates transversely across the inlet of the second fuel line.

6. The mechanical fuel lockout switch for a dual fuel engine of claim 4, further comprising;

a first end of a quick-disconnect hose coupling attached to the inlet of the second fuel line; and

a second end of the quick-disconnect hose coupling attached to the second fuel source to mate with the first end of the quick-disconnect hose coupling to couple the second fuel source to the second fuel line.

7. The mechanical fuel lockout switch for a dual fuel engine of claim 1, wherein the mechanical fuel valve and the fuel lockout apparatus operate together to ensure that fuel from the first fuel source and fuel from the second fuel source are not simultaneously delivered to the dual fuel engine.

8. The mechanical fuel lockout switch for a dual fuel engine of claim 7, wherein the first fuel source provides liquid fuel from a liquid fuel tank to the dual fuel engine and the second fuel source provides gaseous fuel from a pressurized fuel container to the dual fuel engine.

9. A dual fuel generator and fuel delivery system comprising:

a dual fuel generator configured to operate on a liquid fuel supplied from a liquid fuel source through a liquid fuel line and a gaseous fuel supplied from a pressurized fuel source through a gaseous fuel line;

a fuel regulator system located off board the dual fuel generator, the fuel regulator system comprising:

a primary pressure regulator coupled to a service valve of the pressurized fuel source and configured to regulate the fuel supplied from the pressurized fuel source to a reduced pressure; and

a secondary pressure regulator coupled to the primary pressure regulator and configured to regulate the gaseous fuel supplied from the primary pressure regulator to a desired pressure for delivery through the gaseous fuel line to operate the dual fuel generator; and

a mechanical fuel valve actuatable between a first position and a second position to selectively control fuel flow to the dual fuel generator from the liquid fuel source through the liquid fuel line and the pressurized fuel source through the gaseous fuel line.

10. The dual fuel generator and fuel delivery system of claim 9 further comprising a fuel lockout apparatus coupled to the mechanical fuel valve; and

wherein when the mechanical fuel valve is in the first position, the fuel lockout apparatus communicates the liquid fuel source to the dual fuel generator and prevents the pressurized fuel source from coupling to the dual fuel generator, and actuation of the mechanical fuel valve to the second position causes the fuel lockout apparatus to permit the pressurized fuel source to couple to the dual fuel generator, and interrupts the liquid fuel source communication with the dual fuel generator.

11. The dual fuel generator and fuel delivery system of claim 9, wherein mechanical fuel valve opens and closes the liquid fuel line to selectively control fuel flow from the liquid fuel source to the dual fuel generator; and further comprises:

a fuel lockout apparatus coupled to the mechanical fuel valve and configured to prevent the pressurize fuel source from coupling to the gaseous fuel line while the mechanical fuel valve opens the liquid fuel line, and permit the pressurized fuel source to couple to the gaseous fuel line while the mechanical fuel valve closes the liquid fuel line.

12. The dual fuel generator and fuel delivery system of claim 11, wherein the fuel lockout apparatus is further configured to prevent the mechanical fuel valve from opening the liquid fuel line while the dual fuel generator receives fuel from the pressurized fuel source.

13. The dual fuel generator and fuel delivery system of claim 11, wherein the fuel lockout apparatus further comprises a fuel inlet cover that actuates with the mechanical fuel valve to cover an inlet of the gaseous fuel line while the mechanical fuel valve opens the liquid fuel line and to uncover mechanical fuel lockout switch the inlet of the gaseous fuel line when the mechanical fuel valve closes the liquid fuel line.

14. The dual fuel generator and fuel delivery system of claim 9, further comprising:

a first end of a quick-connect hose coupling coupled to an outlet of the secondary pressure regulator; and

a second end of the quick-connect hose coupling coupled to an inlet of the gaseous fuel line to mate with the first end of the quick-connect hose coupling to couple the secondary pressure regulator to the gaseous fuel line.

15. The dual fuel generator and fuel delivery system of claim 9, further comprising a regulator mounting device secured to the pressurized fuel source with at least the secondary pressure regulator mounted on the regulator mounting device.

16. The dual fuel generator and fuel delivery system of claim 15, wherein the primary pressure regulator is mounted on the regulator mounting device.

17. The dual fuel generator and fuel delivery system of claim 16, wherein the pressurized fuel source comprises a pressurized fuel container having a collar; and

wherein the regulator mounting device secures to the collar so that the primary and secondary pressure regulators are positioned adjacent each other along an outer periphery of the collar.

18. The dual fuel generator and fuel delivery system of claim 9, wherein the primary and secondary pressure regulators are integral components of a dual stage pressure regulator.

19. A method of assembling a mechanical fuel lockout switch for an internal combustion engine comprising:

providing an internal combustion engine configured to operate on a fuel from a first fuel source and a different fuel from a second fuel source;

coupling a mechanical fuel valve to the internal combustion engine actuateable between a first position and a second position to selectively control fuel flow to the internal combustion engine from the first fuel source through a first fuel line and the second fuel source through a second fuel line; and

coupling a fuel lockout apparatus to the mechanical fuel valve;

wherein when the mechanical fuel valve is in the first position, the fuel lockout apparatus communicates the first fuel source to the internal combustion engine and prevents the second fuel source from coupling to the internal combustion engine, and actuation of the mechanical fuel valve to the second position causes the fuel lockout apparatus to permit the second fuel source to couple to the internal combustion engine, and interrupts the first fuel source communication with the internal combustion engine.

20. The method of claim 19, wherein the fuel lockout apparatus prevents actuation of the mechanical fuel valve to the first position when the second fuel source is coupled to the internal combustion engine.

21. The method of claim 20, wherein the fuel lockout apparatus is further configured to:

prevent coupling of the second fuel source to the second fuel line while the mechanical fuel valve is in the first position; and

permit coupling of the second fuel source to the second fuel line while the mechanical fuel valve is in the second position.

22. The method of claim 19, wherein the fuel lockout apparatus comprises a fuel inlet cover configured to actuate in unison with the mechanical fuel valve to cover a fuel inlet on the internal combustion engine for the second fuel source when the mechanical fuel valve is in the first position and uncover the fuel inlet when the mechanical fuel valve is in the second position.

23. The method of claim 19, further comprising coupling a fuel regulator system to the second fuel source to reduce fuel pressure therefrom and deliver fuel to the second fuel line at a pressure required for operation of the internal combustion engine.

24. The method of claim 23, further comprising mounting the fuel regulator system to the second fuel source located off-board the internal combustion engine.

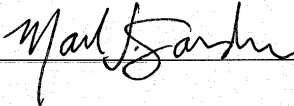
25. The method of claim 23, further comprising:
coupling one end of a quick-disconnect hose coupling to an inlet on the internal combustion engine for the second fuel source; and
coupling a mating end of the quick-disconnect hose coupling to an outlet of the fuel regulator system.

26. The method of claim 19, further comprising providing gasoline in a liquid fuel tank as the first fuel source and LPG in a pressurized fuel container as the second fuel source.

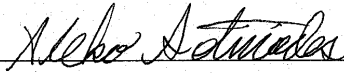
ABSTRACT

A mechanical fuel lockout switch for a dual fuel engine includes a mechanical fuel valve actuateable between a first position and a second position to selectively control fuel flow to the dual fuel engine from a first fuel source through a first fuel line and a second fuel source through a second fuel line. The mechanical fuel lockout switch also includes a fuel lockout apparatus coupled to the mechanical fuel valve. The mechanical fuel lockout switch communicates the first fuel source to the dual fuel engine and prevents communication between the second fuel source and the dual fuel engine when the mechanical fuel valve is in the first position, and communicates the second fuel source to the dual fuel engine and interrupts the first fuel source communication with the dual fuel engine when in the second position.

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE
As the below named inventor, I hereby declare that: This declaration ☒ The attached application, or is directed to: ☐ United States application or PCT international application number _____ filed on _____ The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. WARNING: Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.	
LEGAL NAME OF INVENTOR Inventor: Mark J. Sarder Date (Optional): _____ Signature: 	
Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/AIA/01 form for each additional inventor.	

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As the below named inventor, I hereby declare that: This declaration ☒ The attached application, or is directed to: ☐ United States application or PCT international application number _____ filed on _____ The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. WARNING: Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.	
LEGAL NAME OF INVENTOR	
Inventor: Aleko D. Sotiriades Date (Optional): _____	
Signature: 	
Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/AIA/01 form for each additional inventor.	

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76)

Title of
Invention

DUAL FUEL LOCKOUT SWITCH FOR GENERATOR ENGINE

As the below named inventor, I hereby declare that:

This declaration
is directed to:



The attached application, or



United States application or PCT international application number _____

filed on _____

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

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LEGAL NAME OF INVENTOR

Inventor: James J. Dehn

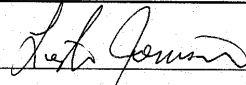
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Signature:

James J. Dehn

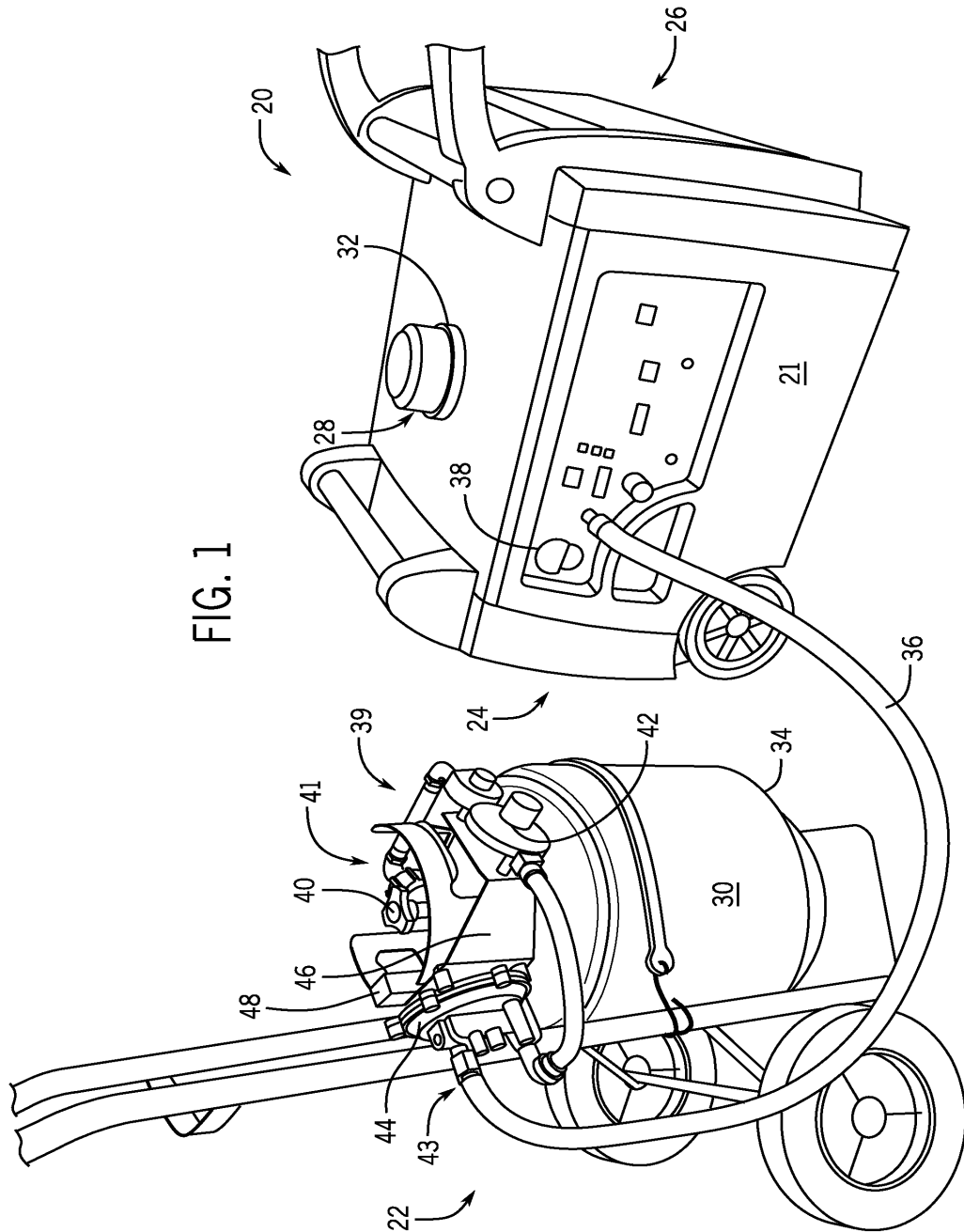
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As the below named inventor, I hereby declare that:	
This declaration is directed to:	☒ The attached application, or ☐ United States application or PCT international application number _____ filed on _____
The above-identified application was made or authorized to be made by me.	
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.	
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Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/AIA/01 form for each additional inventor.	

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FIG. 1



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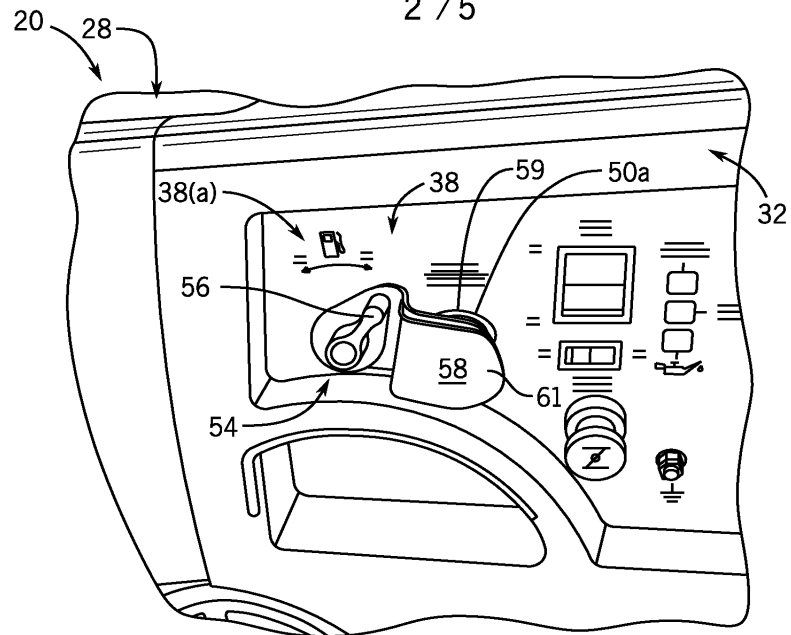


FIG. 2

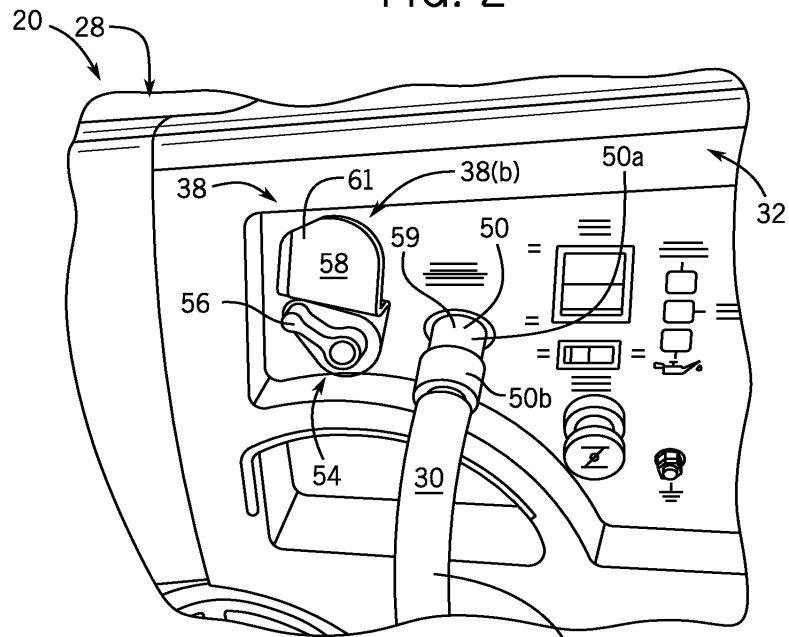


FIG. 3

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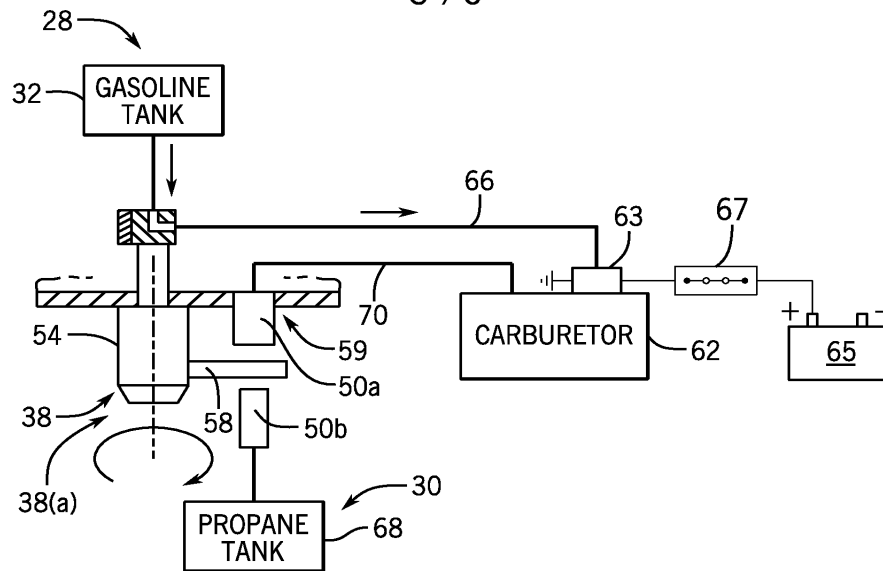


FIG. 4A

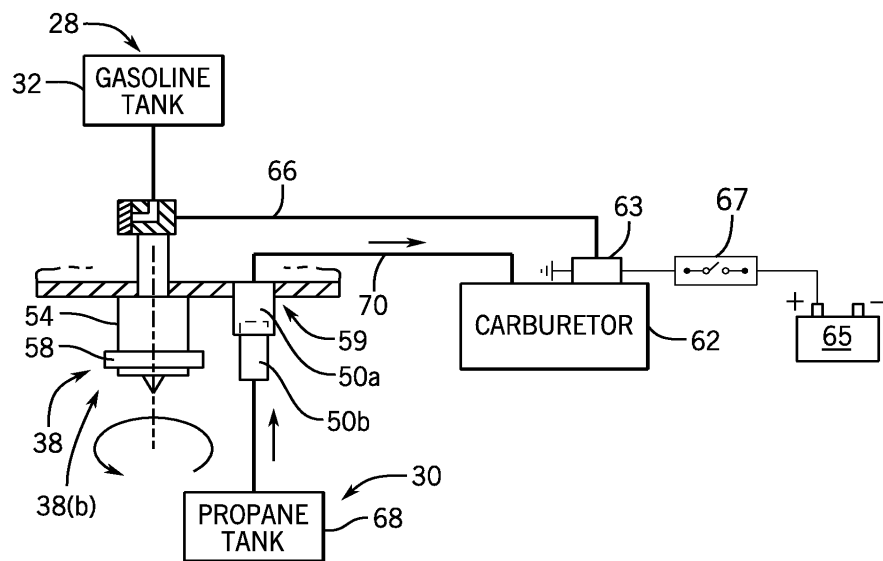


FIG. 4B

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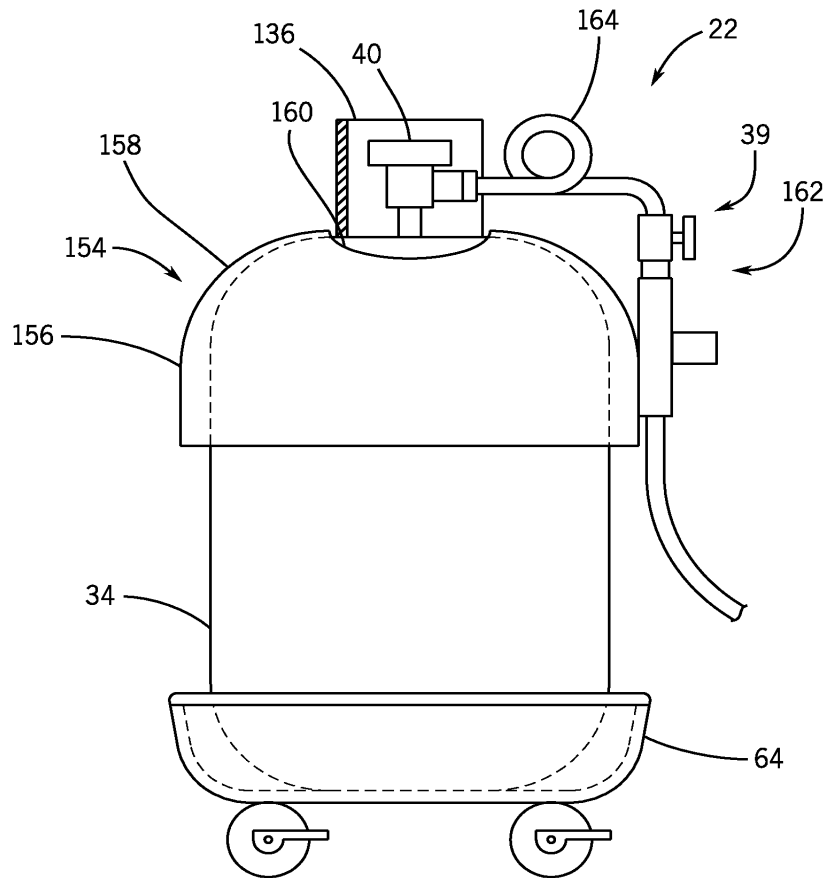


FIG. 6

EXHIBIT 1009

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Champion Power Equipment, Inc.,
Plaintiff/Counterdefendant,
v.
Firman Power Equipment Inc.,
Defendant/Counterplaintiff.

No. CV-23-2371-PHX-DWL

**CHAMPION POWER EQUIPMENT,
INC.'S OPENING CLAIM
CONSTRUCTION BRIEF**

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I. INTRODUCTION

The Court should adopt Plaintiff Champion Power Equipment, Inc.’s (“Champion”) proposed claim constructions for the disputed claim terms of the patents-in-suit¹ (the “Asserted Patents”) and reject those proposed by Defendant Firman Power Equipment, Inc. (“Firman”). Champion’s proposed constructions are the plain and ordinary meaning of the disputed terms in view of the intrinsic record, and are further bolstered by extrinsic evidence, including Champion’s expert testimony. “If a claim term has plain and ordinary meaning, [the Court’s] inquiry ends.” *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1361 (Fed. Cir. 2013).

Firman’s proposed constructions, on the other hand, violate some of the most basic tenets of claim construction, including the rule against importing limitations from a preferred embodiment into the claims and the doctrine of claim differentiation (including both the presumption that different claim terms have different meanings, and that different claims have different scope). Firman’s proposed constructions, divorced from well-established patent law, are unsupported by intrinsic or extrinsic evidence (including expert testimony) and appear to be a litigation tactic to attempt to avoid a finding that Firman has willfully infringed the Asserted Patents.

II. PRINCIPLES OF CLAIM CONSTRUCTION

Courts construe the scope of patent claims as a matter of law. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 391 (1996). Claim constructions form the basis for jury instructions to be used as jurors consider patent infringement. Because the starting point is that all the patent claims are presumed valid and that the claim language has its plain and ordinary meaning, not every term needs to be construed by the Court; only “fundamental disputes” about claim scope must be resolved, and only to the limited extent necessary:

¹ U.S. Patent No. 10,221,780 (the “780 Patent”), No. 10,393,034 (the “034 Patent”), No. 10,598,101 (the “101 Patent”), No. 10,697,398 (the “398 Patent”), No. 11,143,120 (the “120 Patent”), No. 11,143,145 (the “145 Patent”), No. 11,306,667 (the “667 Patent”), No. 11,492,985 (the “985 Patent”), No. 11,530,654 (the “654 Patent”), No. 11,761,390 (the “390 Patent”), No. 11,840,970 (the “970 Patent”), No. 11,905,895 (the “895 Patent”), and No. 11,905,896 (the “896 Patent”). These are attached as Exhibits 1A through 1M.

Although when the parties present a fundamental dispute regarding the scope of a claim term, it is the court's duty to resolve it, courts are not (and should not be) required to construe *every* limitation present in a patent's asserted claims. The purpose of claim construction is to resolve disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement or invalidity. Accordingly, only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.

Promptu Sys. Corp. v. Comcast Corp., 92 F.4th 1372, 1380 (Fed. Cir. 2024) (cleaned up) (citing *O2 Micro Int'l Ltd. v. Beyond Inovvn. Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008); *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997); *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). In some cases, once appropriate claim construction principles are followed, the court determines that there is no true controversy about the meaning, and then no construction is required. *See, e.g., Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015) (The district court did not err in declining to construe the disputed term, which was itself "comprised of commonly used terms; each is used in common parlance and has no special meaning in the art. Because the plain and ordinary meaning of the disputed claim language is clear, the district court did not err by declining to construe the term."); *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1326 (Fed. Cir. 2012) (finding that the district court did not err under *O2 Micro* in concluding that "superimposing" claim terms "have plain meanings that do not require additional construction"); *but see O2 Micro Int'l*, 521 F.3d at 1361 ("A determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate when a term has more than one 'ordinary' meaning or when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute.")

Claim construction is a question of law for the Court. *Markman*, 517 U.S. at 391. Claim terms are given their plain and ordinary meaning as understood by a person having ordinary skill in the art (herein "POSITA"²) at the time of the invention. *Phillips v. AWH*

² Some courts call this a POSA or a PHOSITA. They are the same. "[T]he POS[IT]A is patent law's hypothetical, legal construct 'akin to the 'reasonable person'" used as a reference in negligence determinations." *McCoy v. Heal Sys., LLC*, 850 F. App'x 785, 787–88 (Fed. Cir. 2021) (quoting *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998)). A POSITA is *not* the same as an expert, who often has more skill or knowledge than a

1 *Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). The courts “presume that the terms
 2 in the claim mean what they say.” *Power Integrations*, 711 F.3d at 1360 (Fed. Cir. 2013).
 3 “In some cases, the ordinary meaning of claim language as understood by a person of skill
 4 in the art may be readily apparent even to lay judges, and claim construction in such cases
 5 involves little more than the application of the widely accepted meaning of commonly
 6 understood words.” *Phillips*, 415 F.3d at 1314; *Medicis Pharm. Corp. v. Acella Pharm. Inc.*,
 7 CV 10-1780-PHX-JAT, 2011 WL 810044 (D. Ariz. Mar. 2, 2011). “If the claim term has a
 8 plain and ordinary meaning, our inquiry ends.” *Power Integrations, Inc.*, 711 F.3d at 1361.

9 Claim construction begins by examining the claim language itself because the
 10 claims define the invention. *Phillips*, 415 F.3d at 1312. This bears repeating: “It is the
 11 claims, not the preferred embodiments, that define the metes and bounds of the patentee’s
 12 invention.” *IQRIS Techs. LLC v. Point Blank Enters, Inc.*, 130 F.4th 998, 1004 (Fed. Cir.
 13 2025) (citing *Phillips*, 415 F.3d at 1312, 1323). While the claims are read in view of the
 14 specification, importing a limitation from the specification into the claims has been deemed
 15 one of the “cardinal sins of patent law.” *SciMed Life Sys., Inc. v. Advanced Cardiovascular*
 16 *Sys., Inc.*, 242 F.3d 1337, 1340 (Fed. Cir. 2001); *Hill-Rom Servs., Inc. v. Stryker Corp.*,
 17 755 F.3d 1367, 1371 (Fed. Cir. 2014) (“[W]e do not read limitations from the embodiments
 18 in the specification into the claims.”).

19 One common doctrine that helps resolve disputes about claim scope is called claim
 20 differentiation, which generally means that different words/phrases presumably mean
 21 different things, and a narrower limitation in a dependent claim shows that such limitation
 22 is *not* part of the independent claim from which it depends. “Under the doctrine of claim
 23 differentiation, it is presumed that different words used in different claims result in a
 24 difference in meaning and scope for each of the claims.” *Clearstream Wastewater Sys.,*
 25 *Inc. v. Hydro-Action, Inc.*, 206 F.3d 1440, 1446 (Fed. Cir. 2000). This presumption is at its

26
 27 POSITA. Indeed, “[t]he legal definition of ‘ordinary’ skill for a POS[IT]A can be
 28 contrasted with one of ‘expert’ skill.” *Id.* at 788 (citing *Env’t. Designs, Ltd. v. Union Oil*
Co., 713 F.2d 693, 697 (Fed. Cir. 1983) (noting that a “person of ‘ordinary skill in the art’”
 is not “the judge, . . . layman, or . . . those skilled in remote arts, or . . . geniuses in the art”).

strongest “where the limitation sought to be ‘read into’ an independent claim already appears in a dependent claim.”³ *InterDigital Comm., LLC v. ITC*, 690 F.3d 1318, 1324 (Fed. Cir. 2012) (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed.Cir.2004)). Without the rule against importing a limitation from one claim into another, “the entire statutory and regulatory structure governing the drafting, submission, examination, allowance, and enforceability of claims would crumble.” *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570, 1574 (Fed. Cir. 1985). There is also “a presumption that two independent claims have different scope when different words or phrases are used in those claims.” *Seachange Intern., Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1368-69 (Fed. Cir. 2005).

“There are only two exceptions” to the general rule that claims are given their plain and ordinary meaning: “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (emphasis added). “The standards for finding lexicography and disavowal are exacting.” *Hill-Rom*, 755 F.3d at 1371. Regarding the first exception, “[t]o act as its own lexicographer, a patentee must *clearly* set forth a definition of the disputed claim term other than its plain and ordinary meaning” and must “*clearly* express an intent to *redefine* the term.” *Thorner*, 669 F.3d at 1365 (quoting *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1381 (Fed. Cir. 2008)) (emphasis added). As to the second exception, “[t]o disavow claim scope, the specification must contain

³ An “independent” claim does not refer to any other claim number, and thus stands alone, while a “dependent” claim “depends” on an earlier claim(s) within the same patent, incorporating all the depended-upon limitations and adding other limitations. A hypothetical example could look like this:

Claim 1: A system comprising [structure A, structure B, and structure C].

Claim 2: The system of Claim 1, further comprising [structure D].

Claim 3: The system of Claim 2, wherein [structure D] is made of metal.

Here, Claim 1 is independent, and Claims 2 and 3 are dependent. In this example, under the doctrine of claim differentiation, because Claim 3 depends on Claim 2, the “made of metal” limitation that first occurs in Claim 3 means that “structure D” of Claim 2 need not be *necessarily* made of metal, and because “structure D” is not in Claim 1 at all, it would be improper to read in “structure D” as a limitation of Claim 1.

1 ‘expressions of manifest exclusion or restriction, representing a clear disavowal of claim
 2 scope.’” *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1306 (Fed.
 3 Cir. 2011) (quoting *Epistar Corp. v. Int’l Trade Comm’n*, 556 F.3d 1321, 1335 (Fed. Cir.
 4 2009)). The narrow limits of these two (and only) exceptions were recently emphasized
 5 by the Federal Circuit in *IQRIS*:

6 [T]he patentee is free to choose a term and expect to obtain the
 7 full scope of its plain and ordinary meaning *unless* the patentee
explicitly redefines the term or disavows its full scope.

8 130 F.4th at 1004 (emphasis added) (reversing the district court’s interpretation that a “pull
 9 cord” must be directly pulled by a user—the action of “pulling” was improperly imported
 10 from the specification—because in the absence of inventor lexicography or express
 11 disavowal of claim scope, that limitation cannot be read into the claim). “The standard for
 12 disavowal is exacting, requiring clear and unequivocal evidence that the claimed invention
 13 includes or does not include a particular feature.” *Id.*, 130 F.4th at 1005 (quoting *Poly-Am.,*
 14 *L.P. v. API Indus., Inc.*, 839 F.3d 1131, 1136 (Fed. Cir. 2016)).

15 The patent’s prosecution history may also be relevant to claim construction;
 16 however, claim amendments and statements by the patentee during prosecution do not limit
 17 the claims unless they reflect a “clear and unmistakable disclaimer” of claim scope. *Omega*
 18 *Eng’g v. Raytek*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). Prosecution disclaimer does not
 19 attach “[w]hen the alleged disclaimer is ambiguous or amenable to multiple reasonable
 20 interpretations.” *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1367
 21 (Fed. Cir. 2018); *see also Maquet Cardio. LLC v. Abiomed Inc.*, --- F.4th ---, No. 2023-
 22 2045, 2025 WL 876718, at *10 (Fed. Cir. Mar. 21, 2025) (same).

23 Courts may consider extrinsic evidence such as expert testimony and dictionaries.
 24 *Phillips*, 415 F.3d at 1317. For instance, expert testimony can be used “to ensure that the
 25 court’s understanding of the technical aspects of the patent is consistent with that of a
 26 [POSITA].” *Id.* at 1318. However, extrinsic evidence cannot be used to override the plain
 27 and unambiguous interpretation offered by the claim language and specification. *See*
 28 *Profectus Tech. LLC v. Huawei Techs. Co.*, 823 F.3d 1375, 1380 (Fed. Cir. 2016)

1 (“Extrinsic evidence may not be used to contradict claim meaning that is unambiguous in
 2 light of the intrinsic evidence.”) (citations omitted); *Seabed Geosolutions (US) Inc. v.*
 3 *Magseis FF LLC*, 8 F.4th 1285, 1287 (Fed. Cir. 2021) (“If the meaning of a claim term is
 4 clear from the intrinsic evidence, there is no reason to resort to extrinsic evidence.”).

5 These basic tenets of patent claim construction show that all of the disputed terms
 6 should be accorded their plain and ordinary meaning. The patentee has neither acted as its
 7 own lexicographer nor expressly disavowed any claim scope, and Champion’s expert
 8 testimony on plain and ordinary meaning is unrebutted for all but four of the disputed terms.
 9 Rather than present legitimate disputes of the plain and ordinary meaning of the disputed
 10 claim terms, Firman repeatedly commits the cardinal sin of importing limitations from the
 11 specification into the claims and ignores the doctrine of claim differentiation. Applying
 12 these principles, the Court should reject Firman’s approach to the disputed claim terms and
 13 confirm that the terms should be viewed with their plain and ordinary meaning or the
 14 alternative proposed constructions suggested by Champion below.

15 **III. OBJECTION TO FIRMAN’S LATE CONSTRUCTIONS**

16 Proposed claim construction exchanges were due on January 17, 2025, which was
 17 designed to give adequate time for the parties and their experts to consider the other parties’
 18 positions and prepare appropriately. [See ECF 105.] As of March 4, 2025, Firman’s
 19 construction of “selector switch” was “a component whose positioning enables a subsequent
 20 user selection”; “fuel lockout apparatus” was “an apparatus whose positioning prohibits a
 21 subsequent user action necessary to enable a different fuel source”; and “electro-mechanical
 22 valve system” was “a system of one or more electrically controlled solenoid valves.” [Ex.
 23 2, Firman’s March 5, 2025 redline showing changes from its previous proposal, at 1,
 24 20–21, and 28.] Champion prepared accordingly. However, on March 5, 2025 (two days
 25 before expert reports and the joint claim construction statement were due), Firman changed
 26 its positions on these three terms (as reflected below) and then objected to Champion
 27 supplementing its expert report in response. This eleventh-hour change was prejudicial to
 28 Champion because it did not provide an adequate opportunity to address Firman’s new

positions (and Champion was forced to waste time and money addressing positions that Firman now desires to abandon). Champion served a supplemental expert report on March 14, 2025, to address Firman's late-disclosed positions. Based on Firman's late disclosure and the prejudice caused to Champion, Champion requests that Firman's late-disclosed constructions be stricken.⁴

IV. OVERVIEW OF THE ASSERTED PATENTS

The Asserted Patents relate generally to multi-fuel portable generators, and the switching of fuels. Multi-fuel portable generators can run on more than one fuel source to create electricity. Typically, they can run on liquid fuel such as gasoline or gaseous fuels such as propane or natural gas. The ability to switch between different fuel types provides consumers with the option to use fuels that may be more convenient or produce a higher power output (e.g., gasoline) or fuels that are cleaner (e.g., propane and natural gas).

Examples include: a multi-fuel generator that can have a fuel selector that switches between two fuels. The fuel selector interacts with components such as switches, solenoids, and valves to control which of the different fuels flow to an engine of the multi-fuel generator. Different types of valves in the multi-fuel generator can be mechanical valves or electro-mechanical valves, for example. In one example, a multi-fuel generator can have a mechanical fuel lockout switch that is used to selectively control which fuel flows to the engine from one of the fuel sources. Other components of the multi-fuel generator may include, for example, an engine, a pressure regulator, and an alternator. The components are coupled in a manner that facilitates the desired functionality of the multi-fuel generator.

V. POSITA DEFINITION

Champion's expert witness, William Singhose, Ph.D., has offered an opinion on the skill level for a POSITA that the Court should adopt. [First Supplemental Expert Report of William Singhose, March 14, 2025, attached hereto as Exhibit 3 (the "Singhose Report") at

⁴ If they are not stricken, basic fairness should—at a minimum—compel the Court to overrule Firman's objections to Champion's March 14, 2025 supplemental expert report that was necessitated by Firman's untimely disclosed constructions. Regardless, Champion's March 7 report is sufficient for the Court to find plain meaning for all terms.

¶¶ 28–35.]⁵ In summary, Dr. Singhose opines that the claimed subject matter in the Asserted Patents can be compared to subject matter typically taught in the relevant curricula for mechanical engineering or a closely related field. [*Id.* ¶ 29.] Thus, a POSITA would have a four-year degree in mechanical engineering or a closely related field and at least one year of experience designing, developing, servicing, or operating fuel-powered machinery. [*Id.* ¶ 29.] Additional education could substitute for professional experience and significant work experience—such as working with, servicing, or operating such machinery in the field—could substitute for formal education. [*Id.* ¶ 30.] Dr. Singhose’s senior year mechanical engineering students complete a capstone design project wherein they usually design, construct, and demonstrate a prototype product, and such prototypes often utilize switches, valves, and various mechanical assemblies comparable to the subject matter of the Asserted Patents. [*Id.* ¶ 33.] Therefore, mechanical engineering students would be able to understand and practice most of the claimed features, as well as how those features would be combined and operate. [*Id.*] An additional year⁶ of experience addresses components of such systems, like carburetors with float bowls, not usually taught at the undergraduate level. [*Id.* ¶ 34.] This POSITA definition applies to all the Asserted Patents. [*Id.* ¶ 28.]

VI. DISPUTED TERMS AND PROPOSED CONSTRUCTIONS — TERMS FOR WHICH FIRMAN HAS NO EXPERT TESTIMONY

A. “valve assembly”

⁵ Dr. Singhose disclosed this supplement on March 14, 2025 to address Firman’s untimely disclosed claim constructions (*see* Section III, above). Paragraphs 1–141 of the Singhose Report are identical to the paragraphs of his original report served March 7, 2025, attached as Exhibit 4. For simplicity, Champion will cite only to Exhibit 3. Dr. Singhose is expected to testify at the Claim Construction Hearing consistent with his expert reports (Exhibits 3 and 4) including that those exhibits are true and correct copies of his expert reports. His qualifications are laid out in Paragraphs 3–15 of his report (and his CV attached thereto).

⁶ Firman’s expert, Dr. Jacobs, proposes a POSITA requiring *eight years* of experience *plus* an undergraduate degree. But he only worked on one dual-fuel engine (although he does not remember what it was), does not personally have eight years’ experience working on dual-fuel engines, and never worked in industry after starting formal education. [Jacobs Deposition, Exhibit 5, at 43:7–12, 44:17–25, 46:17–21.] Dr. Singhose, on the other hand, graduated from MIT and has worked in industry. [Ex. 3 at Ex. A, pages 2–4.] There is no support for Firman’s POSITA definition.

'101 Patent Claims 17 and 18; '667 Patent Claims 1–3, 10, and 12–15; '390 Patent Claims 3–7; and '896 Patent Claims 21, 25–28, 30–32	
Champion's Proposed Construction	Firman's Proposed Construction
Plain and ordinary meaning	an assembly including a fuel valve and handle that are separate and distinct from the selector switch

First, Firman proposes *adding* a limitation of a “handle” into the construction of a “valve assembly” when “handle” does not appear in the claims. Second, these claims do not state components are “separate and distinct from the selector switch.” The claims speak for themselves and show that Firman’s construction is untenable under the law.

For example, Claim 17 of the '101 Patent claims, *inter alia*, a “valve assembly positioned on or adjacent the selector switch,”⁷ which inherently contradicts Firman’s proposal that they be “separate and distinct.” Indeed, the “valve assembly” is said to be “on . . . the selector switch,” so they are not necessarily “separate” nor “distinct.” Firman is clearly attempting to force the claims to be read *only* on a preferred embodiment. As another example, Claim 1 of the '667 Patent claims “a selector switch positioned on the valve assembly . . .,” again cutting against Firman’s argument about being “separate” and “distinct.” A rabbit may have ears that are said to be “on” the rabbit or “on” its head, but to say that the ears are “separate” and “distinct” from the rabbit or its head is illogical and not the ordinary meaning. Claim 10 of the '667 Patent is yet another example where the “valve assembly” and the “selector switch” are not called out by the patentee to have any such “separate and distinct” relationship. And Claim 14 of the '667 Patent demonstrates a case where the “valve assembly” and “selector switch” can be related by a “corresponding operation,” but certainly does not require them to be “separate and distinct.”⁸

Also, demonstrating Firman’s attempt to read preferred embodiments into the claims is Firman’s desire to require a “handle” in the “valve assembly” where the patentee clearly did not require it. Claim 10 of the '101 Patent separately refers to “a valve assembly” and

⁷ Similar “on or adjacent” phrasing occurs in the '390 Patent, Claim 4.

⁸ Similar “corresponding operation” phrasing occurs in the '390 Patent, Claim 6.

1 “at least one valve handle positioned on and operably connected to the valve assembly”
 2 Therefore, the “valve assembly” itself cannot be defined to have a handle because the
 3 patentee used separate language to call out when a handle is required. As another example,
 4 Claim 29 of the ’896 Patent further limits dependent Claim 28 (depending from independent
 5 Claim 21 through dependent Claim 26), which has a “valve assembly,” by further claiming
 6 “a first valve handle” and “a second valve handle.” The fact that dependent Claim 29
 7 specifically adds “handle[s]” means the claims from which it depends are not required to
 8 have handles. Otherwise, Claim 29 would be meaningless. For at least these reasons, under
 9 the doctrine of claim differentiation, “valve assembly” cannot be construed as *necessarily*
 10 “including a . . . handle.” A “valve assembly” may include a handle, but it is not required.

11 Firman’s faulty construction invites this Court to make the same error that caused
 12 the Federal Circuit to reverse the district court’s claim construction in *IQRIS Techs. LLC*,
 13 130 F.4th at 1004. There, the district court improperly interpreted “pull cord” as needing to
 14 be “directly pulled” by the user (improperly reading preferred embodiments into the claims)
 15 and that “pull cord” excludes cords with handles. *Id.* at 1003. Referring to plain and
 16 ordinary meaning, and absence of lexicography or disavowal of claim scope, the patentee
 17 argued that (1) the claims do not specify (and thus are not limited to) pulling directly or
 18 indirectly, and (2) the claims were silent about whether the pull cord could have a handle
 19 or not. *Id.* at 1003–04. Applying the correct law, the Federal Circuit agreed with the patentee
 20 that the claim *did not require* a handle (nor the absence of a handle) and *was not limited to*
 21 “direct” pulling, “[e]ven when all embodiments in the written description depict a pull cord
 22 that is directly pulled.” *Id.*

23 Similarly here, the Court should not commit the same error by requiring that the
 24 valve assembly have a handle in any claim that does not expressly require “a handle,” or
 25 that the “valve assembly” be “separate and distinct” from a selector switch. The Court
 26 should adopt the plain and ordinary meaning of “valve assembly.”

27 Finally, and while extrinsic evidence is certainly not necessary for this term (and
 28 Firman has not explained why any extrinsic evidence would be relevant here), Firman’s

own expert could not even testify as to what a “valve” is, let alone what one “requires”. [Ex. 5, at 20:11–21; *cf.* Ex. 3 ¶¶ 137–38.] Unable to describe a “valve”, Firman’s “expert” is not qualified to provide credible testimony in this field. *See also, e.g., Iris Connex, LLC v. Dell, Inc.*, 235 F. Supp. 3d 826, 848 (E.D. Tex. 2017) (issuing sanctions against party that “advanced a claim construction divorced from the specification and claim language, ignored the file history, contravened Federal Circuit law, relied heavily on extrinsic evidence to the exclusion of the intrinsic evidence, and asked the Court to adopt a construction that simply did not make any sense.”)

For the foregoing reasons, the Court should adopt plain and ordinary meaning and reject Firman’s tortured construction that violates claim construction principles.

B. “fuel valve”

’101 Patent Claim 18; ’667 Patent Claims 3 and 15; ’390 Patent Claim 7; ’896 Patent Claims 28 and 32	
Champion’s Proposal	Firman’s Proposal
Plain and ordinary meaning	a mechanical fuel valve

Firman commits the cardinal sin by importing a limitation (“mechanical”) from the specification into claims where it does not exist. Worse, Firman’s construction also violates the doctrine of claim differentiation. “Under the doctrine of claim differentiation, it is presumed that different words used in different claims result in a difference in meaning and scope for each of the claims.” *Clearstream Wastewater Sys., Inc.*, 206 F.3d at 1446. There is also “a presumption that two independent claims have different scope when different words or phrases are used in those claims.” *Seachange Intern., Inc.*, 413 F.3d at 1368–69.

Referring to Claim 18 of the ’101 Patent, the word “mechanical” is wholly absent. However, because dependent Claim 19 adds the “mechanical” limitation to the valves of Claim 18, it necessarily means that Claims 18’s valves need not be mechanical.

As to Claim 3 of the ’667 Patent, since Claim 4 further limits valves of Claim 3 to “non-solenoid, mechanical valves,” Claim 3 cannot be read to have that limitation. As to Claim 7 of the ’390 Patent, Claim 14 is similarly structured, and since Claim 15 further defines the valves as mechanical, then neither Claim 14 nor 7 can be so limited. Similarly,

1 in the '896 Patent, Claim 34 further defines the valves as being mechanical, so to argue that
2 any other claim requires valves to be mechanical would render Claim 34 superfluous.

3 Thus, in the absence of express claim language that a claimed fuel valve is
4 mechanical, a fuel valve may or may not be mechanical. *See IQRIS*, 130 F.4th at 1003–04.
5 [See also Ex. 3 ¶¶ 71–73 (fuel valve may or may not be mechanical).] Accordingly, the
6 Court should adopt plain and ordinary meaning and reject Firman’s invitation to add the
7 word “mechanical” to every occurrence of “fuel valve.”

8 **C. (1) “[a] switch to change operation of the engine between gaseous fuel**
9 **and liquid fuel” and (2) “[a] switch ... to change operation of the engine**
10 **between gaseous fuel and liquid fuel”**

'398 Patent Claims 1 and 57; '145 Patent Claim 1	
Champion’s Proposal	Firman’s Proposal
Plain and ordinary meaning	non-limiting intended use

12 Firman’s “non-limiting intended use” position is frivolous because this doctrine is
13 applied only (if at all) to claim preamble language; the at-issue language is not in the claims’
14 preambles. *See Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 770 (Fed.
15 Cir. 2018) (“Because the terms at issue appear in preambles, we must determine whether
16 the terms are limitations.”) (emphasis added); see also *In re Fought*, 941 F.3d 1175, 1179
17 (Fed. Cir. 2019) (rejecting argument that “travel trailer” in the preamble of a claim was a
18 “non-limiting intended use,” holding it was as a “structural limitation of the claim”). If it is
19 not in a preamble, there is no valid argument that the claimed structure would be
20 “non-limiting”; there is no legal support for Firman’s position, and the inquiry can stop
21 here.

22 Stated differently, Firman asks the Court to excise this element from the claims,
23 which is improper. *See Pause Tech., LLC v. TiVo, Inc.*, 419 F.3d 1326, 1334 (Fed. Cir.
24 2005) (“In construing claims, however, we must give each claim term the respect that it is
25 due.”); *Strattec Sec. Corp. v. Gen. Auto. Specialty Co.*, 126 F.3d 1411, 1417 (Fed. Cir. 1997)
26 (holding that it was legal error for the district court to instruct the jury that the claim term
27 “sheet” was not properly considered part of the claim); *Exxon Chem. Patents, Inc. v.*
28 *Lubrizol Corp.*, 64 F.3d 1553, 1557 (Fed. Cir. 1995) (“We must give meaning to all the

words in Exxon’s claims.”). Among other flaws in this approach, Firman wrongly reads “switch” as a verb (an action) as opposed to a noun (a thing). Since the claim calls for “a” switch, it is clearly a “thing”—a noun—and therefore is a structural limitation to the claim. A cursory review of ’398 Patent Claim 1 shows a list of each physical object as a separate paragraph – an engine, a switch, a carburetor... etc. And, in the final clause, the claim refers to “actuation of the switch.” Clearly, switch is used here as a noun, a thing, subject to “actuation”; it is not an imaginary “non-limiting use.” Example embodiments even contain a reference numeral, switch 38, which is referenced more than 30 times throughout the specifications of the ’398 and ’145 Patents and has two figures dedicated to its placement according to certain embodiments – FIG. 2 and FIG. 3.

Dr. Singhose opines that a POSITA would accord these terms their plain and ordinary meaning consistent with and understood in light of the specification and claim language, which includes a physical structure arranged to allow a fuel selection. [Ex. 3 ¶ 111.] Switches that change the operating mode of machines are common, and a POSITA would be aware of several such switches that would be appropriate for the claimed technology, such as dial switches used by many cars to change the operation of the car from parked, to reverse, to forward travel. [*Id.* ¶ 112.] The Court should reject Firman’s contention that this is a “non-limiting intended use,” and adopt plain and ordinary meaning.

D. “prevent[s] actuation of the mechanical fuel valve”

’780 Patent Claims 2, 8, and 15; ’895 Patent Claims 2 and 8	
Champion’s Proposal	Firman’s Proposal
Plain and ordinary meaning	prevent[s] the mechanical fuel valve from moving

“prevent the mechanical fuel valve from opening the liquid fuel line”

’654 Patent Claim 7; ’970 Patent Claims 5, 27, and 51; ’895 Patent Claim 15	
Champion’s Proposal	Firman’s Proposal
Plain and ordinary meaning	prevent[s] the mechanical fuel valve from moving

The main flaw in Firman’s position for these two separate claim terms is that these are two clearly different phrases and Firman wants them to have an identical meaning. “Under the doctrine of claim differentiation, it is presumed that different words used in

different claims result in a difference in meaning and scope for each of the claims.” *Clearstream Wastewater Sys., Inc.*, 206 F.3d at 1446. There is also “a presumption that two independent claims have different scope when different words or phrases are used in those claims.” *Seachange Intern., Inc.*, 413 F.3d at 1368–69.

Also implicit in Firman’s position is that “actuat[ing]” and “opening” are both identical to the word “moving.” But that is facially false, and Firman gives no support for this construction. Moreover, “moving” presents even more confusion, not less. These are portable generators with tires and wheels—designed to “move” from place to place. If the generator were on a “moving” truck, is the valve “moving”? Firman’s construction creates more questions than answers. Meanwhile, it seems clear that a valve could hypothetically “move” at some level without “opening the liquid fuel line” (as in one of the phrases) or “actuation” as in the other phrase (e.g., the valve could vibrate during the generator’s operation without “opening the liquid fuel line” or “actuating”). A valve could also be “moving” to a closed position, which is not equal to “opening” the fuel line. While maybe “moving” could have an understandable meaning in some hypothetical scenario, it is not the term the patentee chose to use here; if the patentee meant to say it wanted to prevent something from “moving,” it could easily have used that word. [See Ex. 3 ¶ 79.]

For the foregoing reasons, the Court should adopt plain and ordinary meaning and reject Firman’s tortured construction that violates claim construction principles.

E. “simultaneously”

’780 Patent Claim 6; ’895 Patent Claims 6 and 12; ’034 Patent Claim 6	
Champion’s Proposal	Firman’s Proposal
Plain and ordinary meaning, which includes two or more acts occurring over an overlapping time period; alternatively, two or more acts occurring over an overlapping time period.	concurrently

Firman’s proposal to redefine “simultaneously” to “concurrently” only creates more confusion and yet another term to define (*i.e.*, what does “concurrently” mean?). Firman’s proposal adds no clarity whatsoever.

In the first three of the four cited instances of the term, the patentee used the term

1 in the negative—that is, to “prevent simultaneous” fuel delivery or to “not simultaneously”
2 deliver fuel. In the last, Claim 6 of the ’034 Patent, it is used to call for the timing of the
3 liquid cutoff solenoid—“wherein activating the gaseous cutoff simultaneously activates
4 the liquid cutoff solenoid.”

5 A POSITA knows that mechanical components such as valves cannot be instantly
6 moved at an exact instant in time. [Ex. 3 at ¶¶ 105–06.] Newton’s laws of motion dictate
7 that such motions require some time. The patentee recognized that when it stated: “to
8 prevent, or substantially prevent, simultaneous fuel delivery of the liquid fuel and the
9 gaseous fuel to the engine.” [’034, Col. 9, lns. 6–10.] As such, a POSITA knows that the
10 motions of all matter are subject to “time constant” limitations. [Ex. 3 at ¶¶ 105–06.] Each
11 component, and the systems that they form when combined together, require certain time
12 periods to transition from one state to another. [*Id.*] Given this knowledge, a POSITA
13 would view the use of “simultaneously” as indicating that two or more acts are occurring
14 over or during an overlapping time period, but not at any exact moment in time. [*Id.*]

15 Firman’s proposal, “concurrently,” is a term that does not appear anywhere in the
16 specifications for the claims at issue. Moreover, Firman’s proposal violates the laws of
17 physics in requiring two events to occur “concurrently”—over any exact moment in time.
18 [*Id.* ¶ 106.] Thus a POSITA would not understand the term to have this meaning.

19 **F. (1) “selectively control fuel flow to the dual fuel engine from a first fuel**
20 **source through a first fuel line and a second fuel source through a second fuel**
21 **line” and (2) “selectively control fuel flow to the ... [generator / engine] from**
the liquid fuel source through the liquid fuel line and the pressurized fuel
source through the gaseous fuel line”

’780 Patent Claims 1 and 15 ⁹ ; ’985 Patent Claims 5 and 15; ’654 Patent Claims 1 and 6; ’970 Patent Claims 1, 12, 20, and 44; and ’895 Patent Claims 1, 8 and 14	
Champion’s Proposal	Firman’s Proposal
Plain and ordinary meaning	a portion of the mechanical fuel valve mechanically blocks fuel flow from one fuel source while unblocking fuel flow from a second fuel source

26 While the patentee describes in detail how certain valves work in the Detailed
27

28 ⁹ Firman asserts that the ’780 Patent Claim 8 includes a variation of these terms, and Champion disputes that assertion.

Description of the Preferred Embodiment section of the specifications of its patents, consistent with its duty to teach how to practice the inventions, including describing blocking and unblocking functions, the patentee *never* used either “block” or “unblock” in any of the claims. To read such limitations into the claims for these simple phrases that contain no complex words violates the well-settled rule that “while the claims are read in view of the specification, importing a limitation from the specification into the claims has been deemed one of the ‘cardinal sins of patent law.’” *SciMed Life Sys.*, 242 F.3d at 1340.

Further, Dr. Singhose opines that a POSITA would not understand these terms in the way Firman proposes, because Firman’s proposed construction adds extraneous limitations that are not supported by the Asserted Patents, the Asserted Claims, or the prosecution history. [Ex. 3 ¶ 99.] Specifically, Firman’s proposed construction converts a requirement of “selectively control” to a meaning indicating “blocking and unblocking.” “Blocking” is not equivalent to “selectively controlling” because the term “blocking” can mean completely stopping. [*Id.*] On the other hand, “controlling” can certainly include blocking, but also includes increasing and decreasing by various desired amounts. [*Id.*] By importing words like “mechanical” and “unblocking” into the claims without any support, Firman violates basic claim construction principles. *See, e.g., SciMed Life Sys.*, 242 F.3d at 1340; *Hill-Rom*, 755 F.3d at 1371.

G. “desired pressure”

’985 Patent Claim 1; ’654 Patent Claims 1, 6, and 10; ’970 Patent Claims 1, 12, 14, and 20; ’895 Patent Claim 14; ’034 Patent Claims 11 and 24; ’120 Patent Claim 12

Champion’s Proposal	Firman’s Proposal
Plain and ordinary meaning, including any pressure enabling engine operation; alternatively, any pressure enabling engine operation	pressure at which the engine operates

A POSITA reading this claim term in light of the relevant specifications would understand that operating an engine (or generator) is a desirable outcome of the claimed inventions; the claims themselves state as much. [Ex. 3 ¶¶ 62–65.] Therefore, the plain and ordinary meaning of “desired pressure” would contemplate a pressure for the fuel that,

when presented in the context of the remaining limitations of the claim (e.g. “for delivery through the gaseous fuel line”), *would enable engine operation*. Firman’s proposal, “pressure at which the engine operates,” is confusing because it erroneously suggests that there is one such pressure, or worse, that the pressure is in reference to the *engine* as opposed to the *fuel* being delivered to the engine. The salient condition is any pressure that, when presented for delivery through the gaseous fuel line as claimed, *enables* the engine (or generator) to operate. In the context of the claims, Champion’s plain and ordinary meaning proposal makes sense.¹⁰

The language, “desired pressure . . . to operate the engine” directly contradicts Firman’s proposed construction that replaces the patentee’s choice of language “to operate” with the more restrictive and physically nonsensical phrase “at which.” Accordingly, the Court should adopt the claim language’s plain and ordinary meaning, which includes “any pressure enabling engine operation.”

H. “prevent[s] the . . . fuel source from coupling . . . and . . . permit[s] the . . . fuel source to couple”

’780 Patent Claims 1 and 8;’985 Patent Claim 6;’654 Patent Claims 1 and 6;’970 Patent Claims 4, 26, and 50;’895 Patent Claims 1 and 14	
Champion’s Proposal	Firman’s Proposal
Plain and ordinary meaning	prevent[s] ... the fuel source from attaching ... and ... allow[s] the ... fuel source to attach

Champion believes this phrase does not require Court intervention. The phrase uses commonly used, simple words. A POSITA would accord this term its plain and ordinary meaning consistent with, and understood in light of, the specification and claim language, which includes to prevent fuel flow and permit fuel flow. [Ex. 3 ¶ 90.] A POSITA would not understand this term in the way Firman proposes, because Firman’s proposed construction is confusing and overly restricts the meaning of “coupled.” Firman changes the word “couple” to “attach.” Given that “coupled” is a term the parties have agreed should

¹⁰ For example: ’985 Patent Claim 1 states, among other things: “. . . gaseous fuel . . . regulated down to a **desired pressure** . . . for delivery through the gaseous fuel line **to operate the generator**.” The other referenced claims have comparable structure with language including “desired pressure . . . to operate the generator.”

be accorded its plain and ordinary meaning,¹¹ creating specialized definitions for the coupling of the fuel source is confusing. [*Id.* ¶ 91.]

Dr. Singhose opines that the plain and ordinary meaning of “coupled” includes two or more components directly or indirectly interacting with each other, for example, physically, electrically, and/or fluidly. [*Id.* ¶¶ 54 n.1, 93.] Restricting “coupled” to mean only “attached” would eliminate the indirectly interacting aspect of the term “coupled.” More specifically, Firman’s proposed construction would completely eliminate fluid coupling, but the specifications clearly teach that fluid coupling could be included in the term “coupled.” [*Id.*] For example, ’780 Patent Col. 5 Ln. 52 – Col. 6 Ln. 31 gives examples showing that “coupled” as used here can relate to the concept of preventing fuel flow and permitting fuel flow, which Firman’s construction contradicts and unnecessarily limits.

Firman’s proposed construction not only walks back its agreement that “coupled” should be accorded its plain and ordinary meaning [n.11, above], but it also creates confusion instead of clarity. The Court should reject Firman’s proposed construction.

VII. DISPUTED TERMS AND PROPOSED CONSTRUCTIONS — TERMS FOR WHICH FIRMAN HAS DISCLOSED EXPERT TESTIMONY

A. “selector switch”

’101 Patent Claims 17 and 18; ’667 Patent Claims 1, 2, 7–8, 10–12, 14, and 18; ’390 Patent Claims 1–4, and 6; ’896 Patent Claims 21–23, 25, 27, 30–31, and 37	
Champion’s Proposal	Firman’s Proposal
Plain and ordinary meaning	a movable barrier whose positioning enables access for a subsequent user selection of only one fuel source ¹²

Much like the “lockout apparatus,” there is no need to construe the term “selector switch” because it has a well-understood plain and ordinary meaning, examples of which are supported in Col. 5 Ln. 37 – Col. 6 Ln. 31 and FIGS. 2–4B of the ’780 Patent. [*See*

¹¹ Champion originally identified the term “couple” (and similar iterations such as couplable, coupled, coupling, etc.) as terms to be construed by the Court. After the Parties met and conferred on the disputed terms, the Parties agreed the Court need not construe the term, thus granting the term its plain and ordinary meaning. *See, e.g., Phillips* 415 F.3d at 1312 (claim terms are presumed to have their plain and ordinary meaning).

¹² Champion objects to Firman’s proposal as untimely disclosed. [*See* ECF 130 at 1 n. 3.]

Ex. 3 ¶¶ 131, 148–150.] Firman’s proposed construction does not merely commit the cardinal sin of claim construction by attempting to rewrite the claim to import limitations from the specification, *the phrases in Firman’s proposed construction do not even appear in the specification*. The specification does not refer to “barrier,” “moveable,” “positioning,” “access,” “subsequent user,” or “action.” [See also *id.* ¶¶ 150, 157 (explaining why “barrier” is confusing).] This entire construction exists only in Firman’s litigation-driven mind, and it is totally untethered to the claim language.

As in *IQRIS*, 130 F.4th at 1004, “the patentee is free to choose a term and expect to obtain the full scope of its plain and ordinary meaning unless the patentee explicitly redefines the term or disavows its full scope.” Here, as there, “[g]iven the claim language and absence of lexicography or disavowal,” it would be improper to adopt Firman’s proposed construction that improperly imports extraneous limitations into the claims. *Id.*

B. “fuel lockout apparatus”

'780 Claims 1–2, 6, 8–9, and 15; '985 Patent Claim 6	
Champion’s Proposal	Firman’s Proposal
Plain and ordinary meaning	a moveable barrier whose positioning prohibits a subsequent user action necessary to enable a different fuel source ¹³

There is no need to construe the term “fuel lockout apparatus” because it has a well-understood plain and ordinary meaning, examples of which are supported in Col. 5 Ln. 37 – Col. 6 Ln. 31 and FIGS. 2–4B of the '780 Patent. [See Ex. 3 ¶¶ 144–145, 155–157.] Firman’s proposed construction does not merely commit the cardinal sin of claim construction by attempting to rewrite the claim to import limitations from the specification, *the phrases in Firman’s proposed construction do not even appear in the specification*. The specification does not refer to “barrier,” “moveable,” “positioning,” “prohibits,” “subsequent user,” “action,” or “necessary to enable.” [See also *id.* ¶¶ 150, 157 (explaining why “barrier” is confusing).] This entire construction exists only in Firman’s litigation-driven mind, and it is totally untethered to the claim language.

¹³ Champion objects to Firman’s proposal as untimely disclosed. [See ECF 130 at 21 n.22.]

As in *IQRIS*, 130 F.4th at 1004, “the patentee is free to choose a term and expect to obtain the full scope of its plain and ordinary meaning unless the patentee explicitly redefines the term or disavows its full scope.” Here, as there, “[g]iven the claim language and absence of lexicography or disavowal,” it would be improper to adopt Firman’s proposed construction that improperly imports extraneous limitations into the claims. *Id.*

C. “electro-mechanical valve system”

’034 Claims 11 and 13–14; ’120 Claims 13 and 15	
Champion’s Proposal	Firman’s Proposal
Plain and ordinary meaning	A system of one or more solenoid valves ¹⁴

Here, Firman again commits the cardinal sin by importing the “solenoid” limitation into the claimed term “electro-mechanical,” converting the term “electro-mechanical valve” into “solenoid valve.” But that would render the claimed language “electro-mechanical” superfluous, violating a claim construction canon. *See SimpleAir, Inc. v. Sony Ericsson Mobile Commc’ns AB*, 820 F.3d 419, 429 (Fed. Cir. 2016) (“[I]nterpretations that render some portion of the claim language superfluous are disfavored.”) (cleaned up); *Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.”).

The claim differentiation doctrine also requires that the Court reject Firman’s construction because, for example, the ’034 Patent Claims 11 and 13 include “an electro-mechanical valve system” that is not limited to solenoid valves, whereas Claim 14 (which depends on Claim 11) limits the “**electro-mechanical valve system**” as “compris[ing]: a carbuerator cutoff **solenoid** . . . , and a gaseous fuel cutoff **solenoid**.” Therefore, claim differentiation shows that the electro-mechanical valve systems of the non-limited claims (11 and 13) are not required to have **solenoid** valves. Similarly, Claims 13 and 15 of the ’120 Patent do not contain the “solenoid” limitation, even though Claims 1–8, 18, and 19 of the ’120 Patent all contain the “solenoid” limitation. The patentee—and a POSITA reading these patents—clearly understood that “solenoid valve” does not share

¹⁴ Champion objects to Firman’s proposal as untimely disclosed. [See ECF 130 at 29 n.27.]

1 the definition of “electro-mechanical valve.”

2 Specifically, while a solenoid is *an example* of an electro-mechanical valve, a person
3 of ordinary skill in the art would understand that non-solenoid electro-mechanical valves
4 exist that could be employed within the scope of these claims. As the plain and ordinary
5 term implies, the valve system would have an “electrical” aspect and a “mechanical” aspect.
6 [See, e.g., ’034 Patent Col. 2 Ln. 41–44 (in one embodiment, “[t]he electro-mechanical
7 valve system couples to the engine and operates by an electrical switch powered by one of
8 the alternator, a battery, and a magneto . . .”).]

9 While not necessary, extrinsic evidence also supports plain and ordinary meaning.
10 Champion’s expert has explained that other examples of non-solenoid electro-mechanical
11 valves that would have been understood by a POSITA include motorized ball valves, for
12 example. [Ex. 3 ¶¶ 119, 164–169.] Firman’s expert eventually acknowledged that there are
13 types of electro-mechanical valves other than solenoids, after at first not recalling any.
14 [Ex. 5 at 30:14–16, 31:7–10, 19–22, 32:9–15.] Bewilderingly, Firman’s expert does not
15 even know, generally, what a system of one or more valves means. [*Id.* at 103:1–12.]

16 Accordingly, the Court should adopt the plain and ordinary meaning rather than
17 taking Firman’s invitation to commit the cardinal sin of importing the “solenoid” limitation
18 from the specification into the claims, also violating the doctrine of claim differentiation.

19 **D. “coupled to [verb]”¹⁵**

10,393,034 Claims 1 and 18; 11,840,970 Claim 44	
Champion’s Proposal	Firman’s Proposal
Plain and ordinary meaning; alternatively, arranged in a way to perform a desired action, e.g., to “open and close a gaseous fuel source to the engine”	indefinite

24 Firman’s only position here is apparently that “coupled to [verb]” is indefinite under
25 35 U.S.C. § 112. Issued patents are presumed to be valid, which includes a presumption

26 _____
27 ¹⁵ This formulation of “coupled to,” followed by a verb, is the only phrase at issue in this
28 dispute. There are numerous other instances in the asserted patent claims where “coupled to” is in a different grammatical form, *i.e.*, followed by a noun. Those instances of a different grammatical form of “coupled to” are not the subject of the dispute.

1 that they are not indefinite. Accordingly, “[i]ndefiniteness must be proven by clear and
 2 convincing evidence.” *Sonix Tech. Co. v. Publ’ns. Itn’l, Ltd.*, 844 F.3d 1370, 1377 (Fed.
 3 Cir. 2017); *WSOU Invs. LLC v. Google LLC*, No. 2022-1064, 2023 WL 6531525, at *6
 4 (Fed. Cir. Oct. 6, 2023) (party asserting indefiniteness “carries the ultimate burden to show
 5 indefiniteness due to lack of corresponding structure by clear and convincing evidence”).

6 The indefiniteness inquiry is concerned with whether the bounds
 7 of the invention are sufficiently demarcated, not with whether one
 8 of ordinary skill in the art may find a way to practice the
 9 invention. To assess whether a claim is indefinite, therefore, a
 10 court does not look to the knowledge of one skilled in the art apart
 11 from and unconnected to the disclosure of the patent. A court
 12 rather looks at the *disclosure* of the patent and determines if one
 of skill in the art would have understood that *disclosure* to
 encompass the required structure. As such, a patent need not
 explicitly include information that is already well known in the
 art. If a general approach is sufficiently well established in the art
 and referenced in the patent, the claim is not indefinite.

13 *Giesecke & Devrient GmbH v. United States*, 163 Fed. Cl. 430, 444 (2023) (cleaned up).
 14 The phrase “coupled to” in the ’034 Patent Claims 1 and 18 and the ’970 patent Claim 44
 15 is not indefinite, and the Court should adopt its plain and ordinary meaning.

16 First, there is no requirement in patent law that a part cannot be coupled to, or connect
 17 to, perform a given action. For example, a patentee may claim “a fan arranged to cool a
 18 radiator.” That fan need not be connected in any manner whatsoever to the radiator, but it
 19 must be arranged in a manner to cool it.

20 Firman’s entire position wrongly supposes that the English language does not allow
 21 for—and a POSITA would not understand—using a verb after “coupled” because there is
 22 supposedly no way to know which structures are coupled. Firman’s argument fails because
 23 this is an ordinary usage of the English language and because, regardless, the specification
 24 clearly shows examples of structures that can be coupled consistent with this claim
 25 language, such that a POSITA is reasonably informed about the scope of the claims. *See*
 26 *also, e.g., N. Star Innovations, Inc. v. Hirshfeld*, No. 2020-1874, 2021 WL 5121180, at *4
 27 (Fed. Cir. Nov. 4, 2021) (affirming construction of “coupled for receiving” to mean
 28 “connected in order to receive,” demonstrating that “coupled” need not specifically name

the structures being coupled).

The starting point is the claim language itself. *Phillips*, 415 F.3d at 1312.

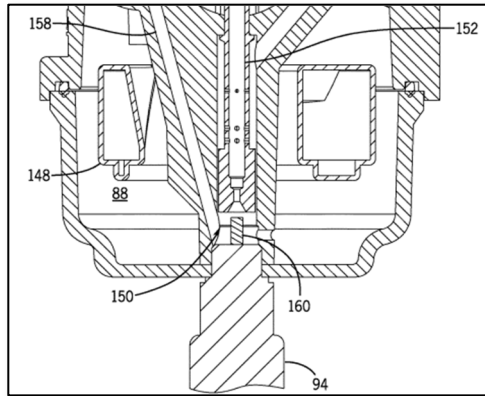
- '034 Claim 1: “a gaseous cutoff **coupled to** open and close a gaseous fuel source to the engine”;
- '034 Claim 18: “a carburetor cutoff solenoid **coupled to** control fuel flow within the carburetor from the liquid fuel line and selectively engage engine operation on liquid fuel”; and
- '970 Claim 44: “a dual fuel engine **coupled to** drive the alternator[.]”

Within the context of the claims, these phrases are understandable and speak for themselves. [Ex. 3 ¶¶ 56–57.] A POSITA would easily understand that “coupled to” in these instances plainly and ordinarily would mean the same thing as “arranged in a way to . . . [perform the action that follows].” [*Id.*] Hence:

- '034 Claim 1: “a gaseous cutoff [**arranged in a way to**] open and close a gaseous fuel source to the engine”;
- '034 Claim 18: “a carburetor cutoff solenoid [**arranged in a way to**] control fuel flow within the carburetor from the liquid fuel line and selectively engage engine operation on liquid fuel”;
- '970 Claim 44: “a dual fuel engine [**arranged in a way**] to drive the alternator[.]”

Even though the claim language itself defeats Firman’s argument, the specifications also show that “coupled to” is not indefinite. Firman argues that there is no way to know what structures are being coupled by looking at the claims, but Firman ignores that “[t]he definiteness inquiry focuses on whether those skilled in the art would understand the scope of the claim when the claim is read *in light of the rest of the specification*.” *BJ Servs. Co. v. Halliburton Energy Servs.*, 338 F.3d 1368, 1372 (Fed. Cir. 2003) (emphasis added). Firman’s position is plainly wrong, and the specifications provide clear examples.

For example, '034 Patent Col. 12 Ln. 15 discloses: “Carburetor cutoff solenoid **94** couples to float bowl **88** to selectively control liquid fuel flow through main fuel circuit **152.**” FIG 4 of the '034 Patent shows an example with reference numerals **88**, **94**, and **152**:



'034 Patent Col. 6 Ln. 5–8 also teaches: “Carburetor cutoff solenoid **94** operates to open and close a liquid fuel path to the engine downstream from float bowl **88** in carburetor **86**. The liquid fuel path in carburetor **86** provides fuel to the throat from float bowl **88** Carburetor cutoff solenoid **94** cuts off liquid fuel flow through the liquid fuel path to provide a liquid fuel cutoff solenoid that controls fuel flow from liquid fuel line **80** to the engine.”

In the '034 Patent, Col. 6 Ln. 27–33 also refers to an “LPG cutoff solenoid **98**, or generally a gaseous fuel cutoff solenoid, coupling gaseous fuel source **82** to the intake and to control the flow of the gaseous fuel to the engine. LPG cutoff solenoid **98** provides a gaseous fuel value coupled along gaseous fuel line **84** to open and close gaseous fuel source **82** to the engine.” (Emphasis added.) [See also '034 Patent Col. 12 at Ln. 8–9 (“carburetor **86** is attached to the engine at engine intake **162**[.]”).] These few (of many) examples refute Firman’s position that it is impossible to know what structures can be “coupled to . . .” within the scope of the claims at issue.

Moreover, Champion’s expert further supports that “coupled to” is not indefinite and that a POSITA would accord this term its plain and ordinary meaning, which includes being arranged in a way to perform a desired function. [Ex. 3 ¶ 56.] This construction is supported by various usages in the academic literature predating the relevant patents. [*Id.* ¶¶ 53–57; see also Ex. 6 at CPN012553 and Ex. 7 at CPN012597 (academic articles predating the Asserted Patents which use the term “coupled to [verb]”); Ex. 5 at 98:1–3, 14–25; 99:17–100:2; 100:23–101:11.]

A person of ordinary skill in the art, especially aided by the patents’ disclosures,

1 would sufficiently understand the claimed structures, thus, “coupled to” is not indefinite.
2 Therefore, the Court should find this term is not indefinite, and adopt its plain and ordinary
3 meaning or, alternatively, that “coupled to” in the context of these three claimed phrases
4 means “arranged in a way to perform” a desired action that is stated in the claim.

5 **VIII. CONCLUSION**

6 For the reasons above, the Court should adopt Champion’s proposals for the disputed
7 patent claim terms in this case.

8 DATED this 11th day of April, 2025.

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EXHIBIT 1010

Duro
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Max
POWER SYSTEMS

DUAL  FUEL



DUAL FUEL
HYBRID  **XP4400EH**
★★★★★ **ELITE**

Product Support (Product: information, application, service info & warranty questions)

Please email us at support@duromaxgenerators.com

or call 1-800-629-3325 (option 3) Monday -Thursday 6am to 6:30pm and Fridays 6am to 5pm. PST

This manual provides information regarding the operation and maintenance of these products.

We have made every effort to ensure the accuracy of the information in this manual.

We reserve the right to change this product at any time without prior notice.

FEATURES

- **Dual Fuel Option, LPG or Gasoline.**
- **Durable 7.0 HP, Air Cooled Overhead Valve Engine.**
- **Heavy Duty Steel Frame with Four Point Fully Isolated Motor Mounts for Smooth and Quiet Operation.**
- **Wheel and Handle Kit for Easy Transporting.**
- **Full Power Panel with Engine Shutoff Switch, Volt Meter, Circuit Breaker and Power Outlets.**
- **(2) Fully Protected 120V Outlets & (1) 120V/240V Twist-Lock Outlet.**
- **8 Hour Run Time.**
- **All Steel 4.0 Gal. Fuel Tank with EZ-Read Gauge.**
- **Low Oil Shut-Off Protects Engine.**
- **Super Quiet Muffler Reduces Engine Noise.**
- **Meets EPA and CARB Emission Standards.**

This manual provides information regarding the operation and maintenance of these products. We have made every effort to ensure the accuracy of the information in this manual. We reserve the right to change this product at any time without prior notice.

Notice Regarding Emissions

Engines that are certified to comply with California and U.S. EPA emission regulations for SORE (Small Off Road Equipment), are certified to operate on regular unleaded gasoline, and may include the following emission control systems: (EM) Engine Modifications and (TWC) Three-Way Catalyst (if so equipped).

GENERAL SAFETY PROCEDURES

Please familiarize yourself with the following safety symbols and words:

The safety alert symbol  is used with one of the safety words (**DANGER**, **CAUTION**, or **WARNING**) to alert you to hazards. Please pay attention to these hazard notices both in this manual and on the generator.

DANGER: Indicates a hazard that will result in serious injury or death if instructions are not followed.

WARNING: Indicates a strong possibility of causing serious injury or death if instructions are not followed.

CAUTION: Indicates a possibility of personal injury or equipment damage if instructions are not followed.

 **DANGER:** This generator produces poisonous carbon monoxide gas when running. This gas is both odorless and colorless. Even if you do not see or smell gas, carbon monoxide may still be present. Breathing this poison can lead to headaches, dizziness, drowsiness, and eventually death.

- Use outdoors **ONLY** in non-confined areas.
- Keep several feet of clearance on all sides to allow proper ventilation of the generator.

 **WARNING:** The exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

 **WARNING:** This generator may emit highly flammable and explosive gasoline vapors, which can cause severe burns or even death. A nearby open flame can lead to explosion even if not directly in contact with gas.

- Do not operate near open flame.
- Do not smoke near generator.
- Always operate on a firm, level surface.
- Always turn generator off before refueling. Allow generator to cool for at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank.
- Do not overfill gas tank. Gas may expand during operation. Do not fill to the top of the tank.
- Always check for spilled gas before operating.
- Empty the gasoline tank before storing or transporting the generator.
- Before transporting, turn fuel valve to off and disconnect the spark plug.

⚠ WARNING: This generator produces powerful voltage, which can result in electrocution.

- ALWAYS ground the generator before using it (see the "*Grounding the Generator*" portion of the "*PREPARING THE GENERATOR FOR USE*" section).
- Generator should only be plugged into electrical devices, either directly or with an extension cord. NEVER connect to a building electrical system without a qualified electrician. Such connections must comply with local electrical laws and codes. Failure to comply can create a backflow of power, which may result in serious injury or death to utility workers.
- Use a ground fault circuit interrupter (GFCI) in highly conductive areas such as metal decking or steel work. GFCIs are available in-line with some extension cords.
- Do not use uncovered in rainy or wet conditions.
- Do not touch bare wires or receptacles (outlets).
- Do not allow children or non-qualified persons to operate.

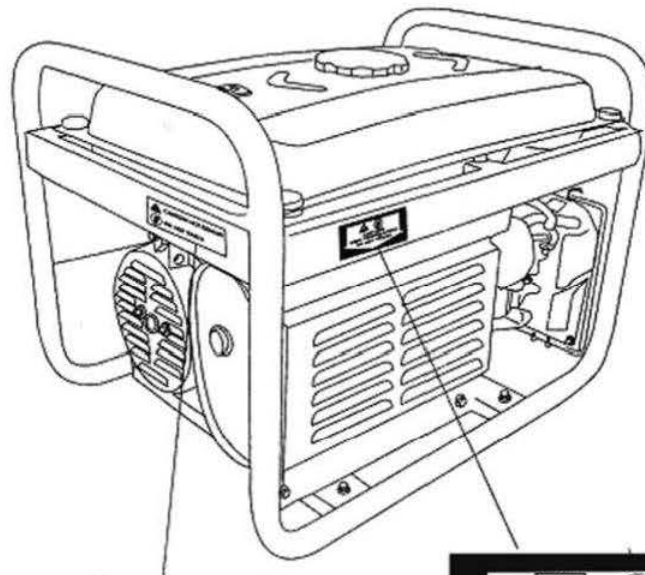
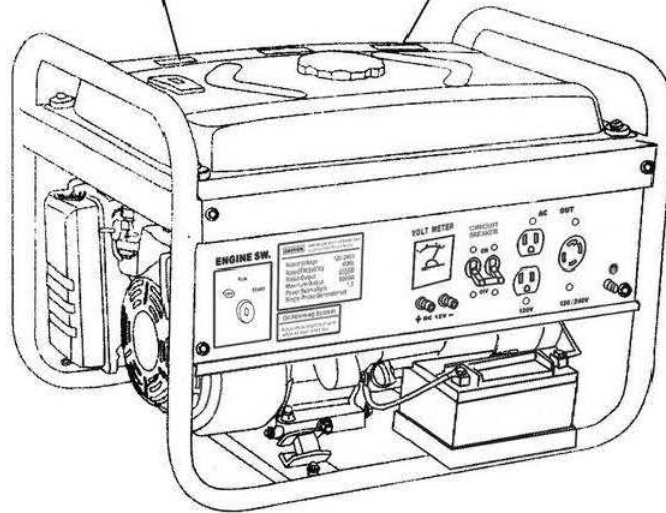
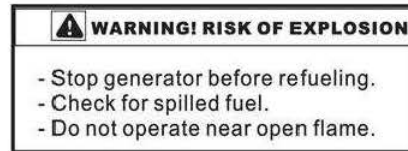
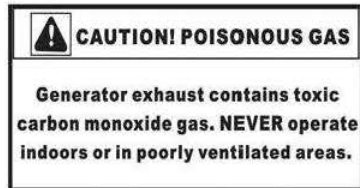
⚠ WARNING: This generator produces heat when running. Temperatures near exhaust can exceed 150°F (65°C).

- Do not touch hot surfaces. Pay attention to warning labels on the generator denoting hot parts of the machine.
- Allow generator to cool several minutes after use before touching engine or areas which heat during use.

CAUTION: Misuse of this generator can damage it or shorten its life.

- Use the generator only for its intended purposes.
- Operate only on dry, level surfaces.
- Allow generator to run for 3 - 5 minutes before connecting any electrical devices.
- Shut off and disconnect any malfunctioning devices from generator.
- Do not exceed the Wattage capacity of the generator by plugging in more electrical devices than the unit can handle (see "*PRECAUTIONS-OVERLOADING THE GENERATOR*").
- Do not turn on electrical devices until after they are connected to the generator.
- Turn off all connected electrical devices, and turn off the breaker, before stopping the generator.

In addition to the above safety notices, please familiarize yourself with the safety and hazard markings on the generator.



PACKAGE CONTENTS

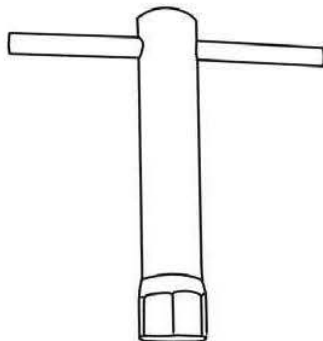
Your generator comes with the items listed below. Please check to see that all of the following items are included with your generator.



Screw driver



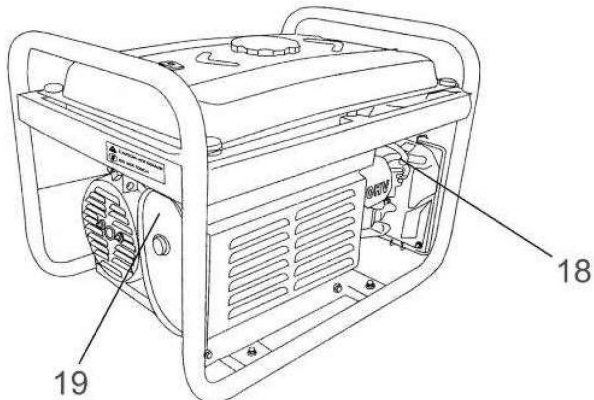
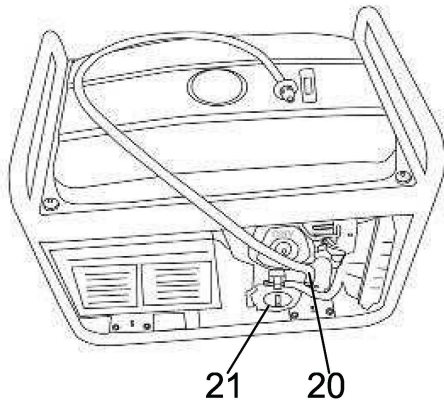
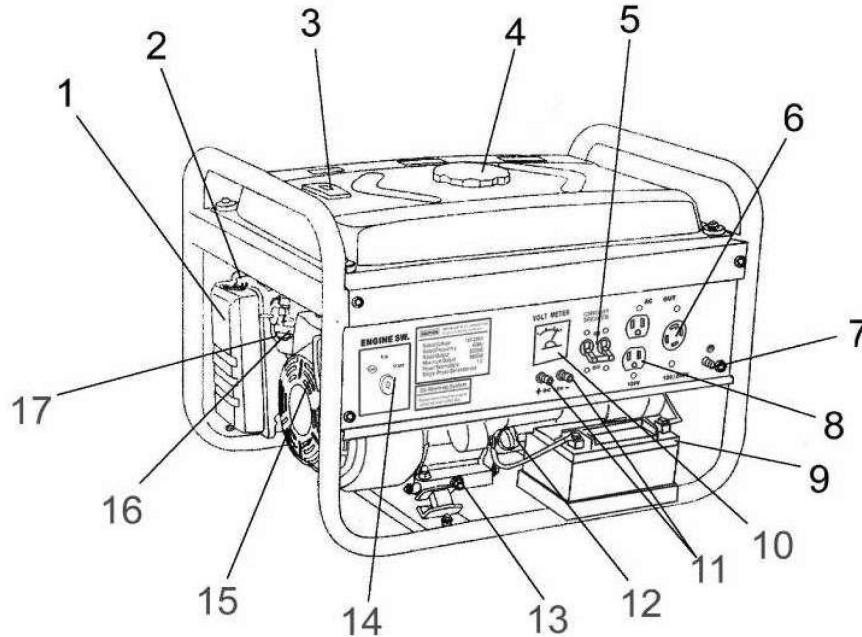
Spanner



Spark plug wrench

GENERATOR COMPONENTS

Please familiarize yourself with the locations and functions of the various components and controls of your generator.



1. **Air cleaner** - a removable, cleanable, sponge-like element that limits the amount of dirt pulled into the engine.
2. **Choke lever** - Adjusts the amount of air let into the engine.
3. **Fuel Gauge** - Indicates the amount of fuel in the tank.
4. **Fuel Cap** - Access to the fuel tank for adding fuel.
5. **Circuit Breaker** - Reset switch that protects the generator from electrical overload.
6. **120/ 240 Volt AC Receptacle** - Use to connect electrical devices that run 120 and/or 240 Volt, 60Hz, single phase, AC current (NEMA L14-30).
7. **Ground Terminal** - Connect grounding wires here to properly ground unit.
8. **120 Volt AC Receptacle** - Use to connect electrical devices that run 120 Volt, 60 Hz, single phase, AC current (2×duplex GFCI).
9. **12V DC Battery.**
10. **Volt Meter** - Provides reading of voltage output.
11. **12v DC Receptacle**- Use for charging 12 Volt automotive-type batteries only.

12. **Oil Filler Cap-** Use to Add oil or checking the oil.
13. **Oil Fill and Dipstick-** Location for checking and filling engine oil.
14. **Engine Switch-** Used to start/stop engine.
15. **Recoil Starter-** Pull-cord for starting engine.
16. **Fuel Filter Cup-** Traps dirt and water from fuel before it enters the engine.
17. **Fuel valve-** Allows fuel to enter engine.
18. **Spark plug-** Provides proper engine ignition.
19. **Muffler-** Reduces engine noise.
20. **Hose connector-** Connect liquid propane gas to generator.
21. **Pressure Release Valve-** Provides regulated liquid propane gas supply.

PREPARING THE GENERATOR FOR USE

Using the Generator for the First Time

If you are using the generator for the first time, there are a few steps you must take to prepare it for operation.

Step 1 - Add oil

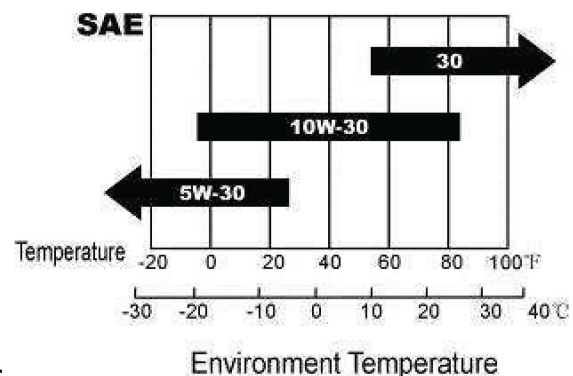
The generator requires engine oil to operate properly. The generator, when new from the package, contains no oil in the crankcase. You must add the proper amount of oil before operating the generator for the first time. This amount, which is equal to the oil capacity of the engine crankcase, can be found on the chart in *figure 1*. When filling the engine with oil in the future, please refer to this chart.

<i>Model number</i>	XP4400H	XP4400EH
<i>Engine oil capacity</i>	20 fluid oz.	

Figure 1- Generator Oil Capacity

CAUTION:

- **Do not apply engine oil with additives or 2-stroke gasoline engine oil**, as they haven't enough lubrication, which may shorten the engine's service life.
- **Engine oil recommended: SAE 10W-30.** As viscosity varies with regions and temperatures, so the lubricant has to be selected in accordance with our recommendation.



To add oil, follow these steps:

1. Make sure the generator is on a level surface.
2. Unscrew the oil filler/dipstick cap from the engine as shown in *figure 2*.
3. Using a funnel, add the appropriate amount of oil, as found in *figure 1*, into the crankcase. You will know the crankcase is full when the oil level has reached the lower lip of the opening you have just poured the oil into (see *figure 3*).
4. Replace oil filler cap.

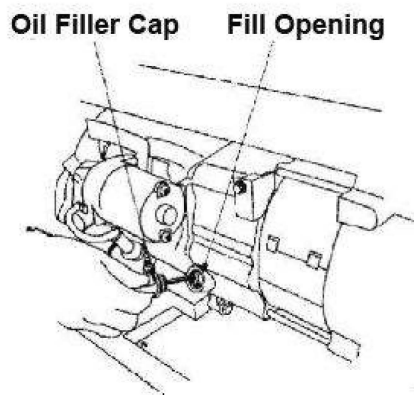


Figure 2- Unscrewing the oil cap



Figure 3 - Adding oil

Step 2 - Add Gasoline

⚠ WARNING: Gasoline and gas fumes are highly flammable.

- Do not fill tank near an open flame.
- Do not overfill. Always check for fuel spills.

To ensure that the generator runs smoothly use only FRESH, UNLEADED GAS WITH AN OCTANE RATING OF 87 OR HIGHER.

To add gasoline:

1. Make sure the generator is on a level surface.
2. Unscrew gas cap and set aside (NOTE: the gas cap may be tight and hard to unscrew).
3. Slowly add unleaded gasoline to the fuel tank. Be careful not to overfill. Please refer to the chart in *figure 4* to find the gas capacity of your generator model. The fuel gauge on the top of the gas tank indicates how much gasoline is in the generator gas tank.
NOTE: Gas can expand. Do not fill the gas tank to the very top.
4. Replace fuel cap and wipe up any spilled gasoline with a dry cloth.

IMPORTANT:

- Never use an oil/gasoline mixture.
- Never use old gas.
- Avoid getting dirt or water in the fuel tank.
- Gas can age in the tank and make it hard to start up the generator in the future.
- Never store generator for extended periods of time with fuel in the tank.

<i>Model number</i>	XP4400H	XP4400EH
<i>Gas tank capacity</i>	15L (3.96 US Gallons)	

Figure 4 - Gas Tank Capacity

Step 3 - Ground the Generator

⚠ WARNING: Failure to properly ground the generator can result in electrocution.

Ground the generator by tightening the grounding nut against a grounding wire (see *figure 5*). A generally acceptable grounding wire is a No. 12 AWG (American Wire Gauge) stranded copper wire. This grounding wire should be connected at the other end to a copper or brass-grounding rod

that is driven into the earth. Grounding codes can vary by location. Please contact a local electrician to check the grounding regulations for your area.

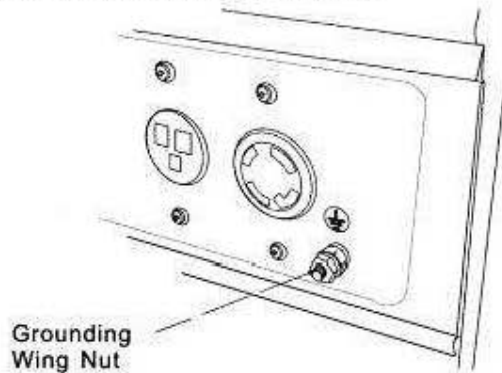


Figure 5 – Attaching the Grounding Wire to the Generator

Subsequent Use of the Generator

If this is not your first time using the generator there are still steps you should take to prepare it for operation.

IMPORTANT: At this point you should be familiar with the procedures described in the first portion of this section entitled "*Using the Generator for the First Time.*" If you have not yet read this section, go back and read it now.

Step 1- Check the oil

The generator is equipped with an automatic shutoff to protect it from damage due to low oil. Nonetheless, you should check the oil level of the engine before each use to ensure that the engine crankcase has a sufficient amount.

To check the oil level:

1. Make sure the generator is on a level surface.
2. Unscrew the oil filler/dipstick cap.
3. With a dry cloth, wipe the oil off of the stick on the inside of the cap.
4. Insert the dipstick as if you were replacing the cap and then remove again. There should now be oil on the stick. If there is no oil on the stick, or oil only at the very end of the stick, you should add oil until the engine crankcase is filled (see "*Adding Oil*" portion of the "*Maintenance*" section).
5. Be sure to replace the cap when finished checking oil.

NOTE: The oil capacity for your generator can be found in the "*Specifications*" section of this manual.

Step 2 - Check the Gas Level

Before starting the generator, check to see that there is sufficient gasoline in the gas tank. The fuel gauge on top of the generator will indicate the gas level in the tank. Add gas if necessary according to the steps in the "*Adding Gasoline*" portion of the "*Maintenance*" section.

⚠ WARNING: Gasoline and gasoline fumes are highly flammable.

- Do not fill tank near an open flame.
- Always allow engine to cool for several minutes before refueling.
- Do not overfill (check the "*Specifications*" section for the tank capacity of your generator). Always check for fuel spills.