UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/491,787	09/19/2014	Edward A. SUGG	034146.00006	1075

4372 7590 06/02/2017

ARENT FOX LLP
1717 K Street, NW
WASHINGTON, DC 20006-5344

EXAMINER	
MURATA, AUSTIN	

ART UNIT	PAPER NUMBER
1712	

NOTIFICATION DATE	DELIVERY MODE
06/02/2017	ELECTRONIC

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):

patentdocket@arentfox.com

Office Action Summary	Application No. 14/491,787	Applicant(s) SUGG ET AL.	
	Examiner AUSTIN MURATA	Art Unit 1712	AIA (First Inventor to File) Status No

-- 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 *4/7/2017*.

☐ 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) *11 and 15-21* 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) *11,15,17 and 19-21* is/are rejected.

8)☒ Claim(s) *16 and 18* 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 _____ 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 *10/11/2016 and 4/27/2017*.

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

4) ☐ Other: _____.

The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/7/2017 has been entered.

Response to Amendment

The amendments filed 4/7/2017 have been entered and fully considered. In view of the amendment the previous rejections are removed. However, new prior art rejections are provided below.

Claim Rejections - 35 USC § 103

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

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under pre-AIA 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of pre-AIA 35 U.S.C. 103(c) and potential pre-AIA 35 U.S.C. 102(e), (f) or (g) prior art under pre-AIA 35 U.S.C. 103(a).

Claims 11, 15 , 17, 19 and 20 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over HORTON et al. (US 2010/0292118) in view of CATON (US 2004/0234701) and LEGROS (US 6,919,302).

Regarding claims 11, 15, and 20,

HORTON teaches a wet wipe with bio-based lubricant **abstract**. Wet wipes are used to deposit composition (by wiping/brushing) **[0003]**. One embodiment teaches the wet wipe includes a solution that is up to 99.9% bio-based lubricant **[0010]** (about 100%[1]). The bio-based lubricant can include a number of vegetable oils and can be a

[1] The term "about 100%" is distinguished from "100%" in applicant's specification **[0025]**.

combination of vegetable oils **[0020]**. The list of vegetable oils also includes other vegetable oils with smoke points higher than 200ºC according to the smoke points provided in the specification **[0027]** such as soybean, rapeseed, corn, sunflower, cottonseed, peanut, safflower, sesame, flax seed, hemp, and rice bran oil, see HORTON **[0020]**. The list of vegetable oils includes olive oil **[0020]** which has a smoke point above 200ºF according to applicant's disclosure **[0027]** and further can have an oleic acid content of up to 85% (which overlaps the claimed range) evidenced by LEGROS **column 2 line 26**. At the time of the invention it would have been prima facie obvious to one of ordinary skill in the art to use olive oil with a oleic acid content of up to 85% because the reference does not distinguish between olive oil with different content of oleic acid and it would be obvious to try all compositions of olive oil.

HORTON teaches a wet wipe that can apply a lubricating composition (by brushing) but only refers to garden tools, cutting blades, and skate blades **[0005]**. The reference does not expressly teach applying the composition to remove or prevent carbon fouling on a device that deposits carbon onto a component (such as a firearm). However, the benefits of lubricants is displayed in many different fields, including firearms and machining according to CATON **[0081]**. At the time of the invention it would have been prima facie obvious to one of ordinary skill in the art to use the lubricant of HORTON in applications that benefit from lubricant and routine maintenance, including firearms and other machinery.

Regarding claim 17,

The examiner takes official notice that ordinary maintenance and lubrication can occur in day light which exposes the lubricant to ultraviolet light.

Regarding claim 19,

The HORTON reference is silent to the atmospheric conditions when the lubricant is applied. Therefore, the conditions are presumed to be standard temperature and pressure which is room temperature at 1ATM which falls within the claimed range of about 1 to 5 ATM.

Response to Arguments

The amendment requires that the vegetable oil composition deposited onto a mechanical component of a device contains at least 3 vegetable oils at a content of about 100%. In view of the amendment, the rejection in view of the LEGROS reference is removed because the entire composition includes components other than vegetable oil. Although part of the composition contains 100% vegetable oil, the examiner could find no reason to deposit only part of the composition onto a device when it is intended to be mixed with other parts of the composition. However, a new rejection is provided above in which a composition of about 100% vegetable oil is applied to a device.

Allowable Subject Matter

Claims 16 and 18 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.

Regarding claims 16 and 18,

Modified HORTON teaches a lubricating wet wipe that can be applied to articles requiring lubricant. However, the reference does not teach a heat treatment step after application (claim 16) or the application process as an immersive step in a preheated bath (claim 18).

The previous rejection relied upon LEGROS which taught a similar composition can be used as a preheated bath and can be heated after application. However, the composition of LEGROS is materially different and incorporates components other than vegetable oils that combine for a volume of about 100% by volume. In fact, there is no reason to perform the heating of LEGROS because the heating step is to "dry" the composition. With the vegetable oil composition being about 100% by volume various oils, there is no need to "dry" the deposited oils.

The examiner notes that although ordinary operation of a firearm will heat the lubricant (and decomposes the lubricant). Operation of a firearm is the cause of fouling and is not considered part of "a method of removing or preventing carbon fouling" as stated in the claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AUSTIN MURATA whose telephone number is (571)270-5596. The examiner can normally be reached on Monday through Friday 9:00-5:30.

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, MICHAEL CLEVELAND can be reached on (571)272-1418. 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.

/AUSTIN MURATA/
Primary Examiner, Art Unit 1712

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. – 10. (Cancelled)

11. (Currently Amended) A method of removing or preventing carbon fouling on a mechanical component of a device, comprising:

depositing a vegetable oil composition on the mechanical component of the device,

wherein the vegetable oil composition comprises at least three vegetable oils, each vegetable oil having a smoke point above 93.3°C (200°F), and wherein at least one of the at least three vegetable oils has 80% by weight or greater oleic acid,

wherein the combined volume of the at least three vegetable oils is present in an amount of ~~at least~~ about 100% [[25%]] by volume of the total volume of the oil composition; and

wherein operation of the device deposits carbon on the mechanical component.

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Original) The method of claim 11, where the depositing step comprises one of spraying, immersing, or brushing the oil composition on the mechanical component of the device.

16. (Previously Presented) The method of claim 11, further comprising drying the deposited oil composition by heating at a temperature of about 37.8°C (100°F) to about 204.4°C (400°F).

17. (Original) The method of claim 11, further comprising exposing the deposited composition to ultraviolet light.

18. (Previously Presented) The method of claim 15, wherein the mechanical component is immersed at a temperature of about 37.8°C (100°F) to about 204.4°C (400°F) for a period between about 10 minutes to about 24 hours.

19. (Original) The method of claim 11, wherein the depositing step comprises applying a pressure of about 1 to about 5 ATM.

20. (Original) The method of claim 11, wherein the mechanical component is a component of a firearm.

21. (Original) The method of claim 18, wherein the mechanical component of the firearm is selected from the group consisting of: a trigger, a hammer, a disconnector, a trigger pin, a firing pin, a chamber, a bolt, a bolt face, a bolt carrier, a breach face, a camming pin, a piston, an operating rod, a gas tube, a barrel, a slide, a retention rail, an upper receiver, a lower receiver, a magazine follower, a suppressor mount, a compensator, a flash hider, charging handle, feed tray, and a baffle.

22. – 24. (Cancelled)