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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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17/482,045

09/22/2021

Clinton Moss

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EXAMINER

STEPHENSON, DANIEL P

ART UNIT

PAPER NUMBER

3676

MAIL DATE

DELIVERY MODE

09/28/2022

PAPER

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

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

Office Action Summary

Application No.

17/482,045

Applicant(s)

Moss, Clinton

Examiner

DANIEL P STEPHENSON

Art Unit

3676

AIA (FITF) 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 _____.
☐ 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) 1-21 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5a) Of the above claim(s) _____ is/are withdrawn from consideration.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) 1-14 and 16-21 is/are rejected.
- 8) ☒ Claim(s) 15 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 9/22/21 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: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

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

Drawings

2. The drawings are objected to because the line weight of the figures and reference numerals is not consistent with regards to Fig. 1-4. In addition, the shaded areas and cross hatching is not accurate and the current size provides low readability. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. 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.

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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.

4. Claims 6 and 14 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 applications subject to pre-AIA 35 U.S.C. 112, the applicant), regards as the invention.

5. Claim 6 is rejected as indefinite because it claims that the “drill pipe is a section of drill pipe”, but all that is claimed in claim 1 are sections of drill pipe. Claim 6 fails to further limit claim 1.

Claim Rejections - 35 USC § 102

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

A person shall be entitled to a patent unless –

(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.

(a)(2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.

7. Claim(s) 1-4, 6-12, 14 and 16-21 is/are rejected under 35 U.S.C. 102(a)(1) as being anticipated by Kuckes (US 9759060).

With regards to claim 1, it discloses an apparatus for magnetic ranging comprising: a power supply (24); at least one section of drill pipe (57) operatively connected to the power supply; a first electrically insulated member (71) electrically connected with the at least one section of drill pipe and that is capable of causing electrical energy (130) to exit a section of drill pipe; a sensor (102) for detecting a magnetic ranging signal.

With regards to claim 2, it discloses a second electrically insulated member (72) located further downhole from the first electrically insulated member.

With regards to claim 3, it discloses the sensor (102) is part of the bottom hole assembly.

With regards to claim 4, the sensor (102) is part of the drill pipe.

With regards to claim 6, it discloses the drill pipe (57) is a section of drill pipe.

With regards to claim 7, it discloses that the power supply (24) is connected to the drill pipe (57) using at least one wire (90) of a multiribbon wire (the wireline is disclosed as capable of carrying data and current, hence it is inherently a multiribbon wire).

With regards to claim 8, it discloses the power supply (24) is connected to the drill pipe using one or more conductors (col. 9:58-10:16).

With regards to claim 9, it discloses an apparatus for magnetic ranging comprising: a power supply (24); at least one section of drill pipe (56-58, 71, 72) the at least one section of drill pipe partially lined with at least one insulative material (71, 72) and partially lined with at least one conductive material (57), the conductive material electrically connected to the power supply; a first electrically insulated member (71) electrically connected with the at least one conductor lining (57) at least a portion of the section of drill pipe and that is capable of causing electrical energy (130) to exit from the at least one conductive material and into a formation surrounding a wellbore; a sensor (102) for detecting a magnetic ranging signal.

With regards to claim 10, it discloses a second electrically insulated member (72) located further downhole from the first electrically insulated member.

With regards to claim 11, it discloses the sensor (102) is part of the bottom hole assembly.

With regards to claim 12, the sensor (102) is part of the drill pipe.

With regards to claim 14, it discloses the drill pipe (57) is a section of drill pipe.

With regards to claim 16, it discloses that the power supply (24) is connected to the drill pipe (57) using at least one wire (90) of a multiribbon wire (the wireline is disclosed as capable of carrying data and current, hence it is inherently a multiribbon wire).

With regards to claim 17, it discloses the power supply (24) is connected to the drill pipe using one or more conductors (col. 9:58-10:16).

With regards to claim 18, it discloses a method of magnetic ranging comprising: installing a sensor (102) that senses a magnetic ranging signal in a wellbore; installing a first electrically insulative gap sub (71) in a wellbore; installing at least one section of drill pipe (57) in a wellbore that is connected to the electrically insulative gap sub; connecting a power supply (24) to at least one section of drill pipe; energizing the power supply to cause current to flow down the drill pipe and inject into a wellbore (130) formation and travel to a target well to create a magnetic ranging signal (136); sampling the magnetic ranging signal and adjusting the drilling operations to alter a characteristic of the drilling operations (col. 15:1-24).

With regards to claims 19 and 20, it discloses adjusting the drilling operations to alter a characteristic of the drilling operations such that the angle of drilling is changed (col. 3:3-20).

With regards to claim 21, it discloses installing a second electrically insulative gap sub (72) downhole from the first electrically insulative gap sub (71).

Claim Rejections - 35 USC § 103

8. 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.

9. **Claim(s) 5 and 13 are is/are rejected under 35 U.S.C. 103 as being unpatentable over Kuckes.**

With regards to claims 5 and 13, Kuckes shows all the limitation of the present invention except, it doesn't explicitly disclose that the drill pipe is coiled tubing. It is taken as Official Notice that many types of tubing/casing is used downhole and that coiled tubing applications would be comparable to applications done with threaded drill string where more flexibility is required. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was filed to use the drill pipe apparatus of Kuckes with coiled tubing. This would be done to allow for continuous feed of the drill downhole.

Allowable Subject Matter

10. Claim 15 is 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.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited prior art all show similar features to those of the claimed invention.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL P STEPHENSON whose telephone number is (571)272-7035. The examiner can normally be reached M-F 10am-6pm.

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, Robert Fuller can be reached on (571) 272-6300. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: <https://patentcenter.uspto.gov>. Visit <https://www.uspto.gov/patents/apply/patent-center> for more information about Patent Center and <https://www.uspto.gov/patents/docx> for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIEL P STEPHENSON/
Primary Examiner, Art Unit 3676