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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/433,118	05/12/2006	Calvin C. Potter	H0011544-3112 (002.3345)	2677

89955 7590 03/25/2010

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EXAMINER	
TALPALATSKIY, ALEXANDER	
ART UNIT	PAPER NUMBER
2832	

NOTIFICATION DATE	DELIVERY MODE
03/25/2010	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):

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Office Action Summary	Application No.	Applicant(s)	
	11/433,118	POTTER ET AL.	
	Examiner	Art Unit	
	Alexander Talpalatskiy	2832	

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

Period for Reply

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

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

Status

1)☒ Responsive to communication(s) filed on *17 December 2009*.

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

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-9 and 13-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 5-9, and 13-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

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

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

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

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/17/2009 have been fully considered but they are not persuasive. The applicant argues that there is no teaching to use a latch structure of Kordick in place of the latch included in McKeown. There are clear advantages in using the electrical system of Kordick since it is a frictionless latch/brake that would require less maintenance and can also provide improved control since the shown structure is able to provide very precise adjustments. The amendments do not overcome the prior art since the combined references teach a structure that is configured to provide the function recited in the amendment. It has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. ***In re Hutchinson, 69 USPQ 138.*** The new language of "configured to" is similar in nature as "adapted to" since both of the limitations and the language that follows are functional in nature (requiring the structure to only have the ability to perform a function). No major structural limitations are present in the amended language. Thus the rejection is still valid.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 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 of this title, 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.

3. Claims 1, 5-7, 9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKewon (US 6325331) in view of Kordik (US 3984711) and Stephenson (US 5043618).

4. In re claim 1, McKeown, in figures 1 and 2, discloses two embodiments of a control system including a power drive unit (29) adapted to receive drive power and configured, upon receipt of the drive power, to rotate; an actuator (33/37) coupled to the power drive unit and configured, in response to power drive unit rotation, to move to a position. McKeown discloses a latch (15) coupled to the drive unit, but does not disclose the details. Kordik however, in figure 2, discloses a rotor (15), one or more permanent magnets (30) surrounding the rotor, and supplying magnetic field that opposes rotation of the rotor; and electromagnet (24/14) adapted to receive a flow of electrical current and configured upon receipt thereof to generate a magnetic field that simultaneously opposes or aids all of the fields supplied by the permanent magnets, a latch stator (13) non-rotationally mounted adjacent to, and at least partially surrounding, the latch rotor; and a plurality of latch windings (24) wound around at least a portion of the latch stator. Kordik does not teach N/2 number of magnet pole pairs where N is the number of lobes of the rotor. Stephenson however, in figures 1-3, discloses a configuration with N/2 relationship between the number of lobes on the rotor and the number of pole pairs in the stator. It would have been obvious to one skilled in the art at the time the invention was made to have used the structure taught by Kordik in the latch of McKeown to allow improved rotation control of the apparatus and have further modified the combined invention with the rotor lobes / stator pole pair ratio taught by Stephenson to provide

improved latching flux control. Furthermore, it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. ***In re Hutchinson, 69 USPQ 138.***

5. In re claim 5, Kordik, in figure 2, discloses that the plurality of lobes comprises a magnetically permeable material (see column 2, line 18 of the specification).

6. In re claim 6, McKeown, in figure 7, discloses an actuation member (71) coupled to the power drive unit and configured to rotate in response to rotation of the drive unit.

7. In re claim 7, McKeown, in figure 7, discloses a translation member (53) disposed adjacent the actuation member and configured, upon rotation of the actuation member to translate to a position.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over McKeown, Kordik, and Stephenson as applied to claim 7 above, and further in view of Gaines et al. (US 2005/0247529).

9. In re claim 8 McKeown/Kordik/Stephenson disclose actuation/translation members but do not show ballscrew/ballnut configuration. Gaines et al., in figure 4, discloses a ballscrew/ballnut actuator configuration. It would have been an obvious matter of design choice to replace the actuation/translation members of McKeown with the structure taught by Gaines et al.

10. In re claim 9, McKeown, in figures 1 and 2, discloses two embodiments of a control system including a power drive unit (29) adapted to receive drive power and configured, upon receipt of the drive power, to rotate. McKeown discloses a latch (15)

coupled to the drive unit, but does not disclose the details. Kordik however, in figure 2, discloses a rotor (15), one or more permanent magnets (30) surrounding the rotor, and supplying magnetic field that opposes rotation of the rotor; and electromagnet (24/14) adapted to receive a flow of electrical current and upon receipt thereof to generate a magnetic field that simulteneously opposes or aids the field supplied by the magnets, a latch stator (13) non-rotationally mounted adjacent to, and at least partially surrounding, the latch rotor, and a plurality of latch windings (24) wound around at least a portion of the latch stator. Kordik does not teach N/2 number of magnet pole pairs where N is the number of lobes of the rotor. Stephenson however, in figures 1-3, discloses a configuration with N/2 relationship between the number of lobes on the rotor and the number of pole pairs in the stator. It would have been obvious to one skilled in the art at the time the invention was made to have used the structure taught by Kordik in the latch of McKeown to allow improved rotation control of the apparatus and have further modified the combined invention with the rotor lobes / stator pole pair ratio taught by Stephenson to provide improved latching flux control. Furthermore, it has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. ***In re Hutchinson, 69 USPQ 138.***

11. In re claim 13, Kordik, in figure 2, discloses that the plurality of lobes comprises a magnetically permeable material (see column 2, line 18 of the specification).

12. Claims 14 - 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKewon (US 6325331) in view of Kordik (US 3984711).

13. In re claim 14, McKeown, in figures 1 and 2, discloses two embodiments of a control system including a control circuit (39) that selectively supplies drive control signals, (no input is shown, however an input signal is inherent in such a system) a power drive unit (29) adapted to receive drive power and configured, upon receipt of the drive power, to rotate. McKeown discloses a latch (15) coupled to the drive unit, but does not disclose the details. Kordik however, in figure 2, discloses a rotor (15), a plurality of permanent magnets (30) surrounding the rotor, and supplying magnetic field that opposes rotation of the rotor; and electromagnet (24/14) coupled to receive the selectively supplied latch control signals and configured, upon receipt thereof when the latch control signals are supplied, to generate a magnetic field that simultaneously opposes or aids the fields supplied by all of the permanent magnets and does not induce torque in the latch rotor. It would have been obvious to one skilled in the art at the time the invention was made to have used the structure taught by Kordik in the latch of McKeown to allow improved rotation control of the apparatus. Furthermore, it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. ***In re Hutchinson, 69 USPQ 138.*** The applicant argues that the apparatus taught by Kordik would not work since the principle of operation would be changed. The examiner disagrees since the type of motor taught is well known in the art to be used as a motor, brake, latching apparatus, or any combination thereof and is fully capable of performing the claimed function.

14. In re claim 15, Kordik, in figure 2, discloses a latch stator (13) non-rotationally mounted adjacent to, and at least partially surrounding, the latch rotor; and a plurality of latch windings (24) wound around at least a portion of the latch stator, the latch windings coupled to receive the selectively supplied latch control signals and configured, when the latch control signals are supplied, to generate the magnetic field, wherein the permanent magnets are mounted on the latch stator and are disposed adjacent each of the latch windings.

15. In re claim 16, Kordik, in figure 2, discloses that each of the one or more permanent magnets has one or more pole pairs; and the coils are wound on the latch stator such that, upon receipt of the latch control signals, the coils generate the same number of magnetic pole pairs as there are permanent magnets.

16. In re claim 17, Kordik, in figure 2, discloses that the latch rotor comprises a main body having a plurality of lobes (23) extending radially therefrom.

17. In re claim 18, Kordik, in figure 2, discloses that the plurality of lobes comprises a magnetically permeable material (see column 2, line 18 of the specification).

18. In re claim 19, Kordik, in figure 5, discloses a power source (25/26) operable to receive control signals and to supply current to the electromagnets. Furthermore, a controlled power source is an inherent component of the system shown by McKeown.

19. In re claim 20, McKeown, in figures 1 and 2, discloses two embodiments of a control system including a control circuit (39) that selectively supplies drive control signals, (no input is shown, however an input signal is inherent in such a system) a power drive unit (29) adapted to receive drive power and configured, upon receipt of the

drive power, to rotate. McKeown discloses a latch (15) coupled to the drive unit, but does not disclose the details. Kordik however, in figure 2, discloses a latch rotor (15); an electromagnet (24/14) that generates a magnetic field that selectively opposes or aids the field supplied by the magnets. It would have been obvious to one skilled in the art at the time the invention was made to have used the structure taught by Kordik in the latch of McKeown to allow improved rotation control of the apparatus. Furthermore, it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. ***In re Hutchinson, 69 USPQ 138.***

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Talpalatskiy whose telephone number is

(571)270-3908. The examiner can normally be reached on Monday - Friday, 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. 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.

/Elvin G Enad/
Supervisory Patent Examiner, Art Unit 2832

Alexander Talpalatskiy
Examiner
Art Unit 2832