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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/610,504	05/31/2017	Andrew John Wehrli	096001-1205	5160
48329 7590 07/03/2017 FOLEY & LARDNER LLP 3000 K STREET N.W. SUITE 600 WASHINGTON, DC 20007-5109			EXAMINER MAYO III, WILLIAM H	
			ART UNIT 2847	PAPER NUMBER
			NOTIFICATION DATE 07/03/2017	DELIVERY MODE 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):

ipdocketing@foley.com

Office Action Summary	Application No. 15/610,504	Applicant(s) WEHRLI ET AL.	
	Examiner WILLIAM H. MAYO III	Art Unit 2847	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 _____.
☐ 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) 1-20 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) 1-20 is/are rejected.
- 8) ☐ Claim(s) _____ 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 5/31/2017 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) | 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
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.

Priority

2. Acknowledgment is made of applicant's claim for domestic priority under 35 U.S.C. 120. The Continuation Application Number 14/520,125, being filed on October 21, 2014.
3. Acknowledgment is made of applicant's claim for provisional priority under 35 U.S.C. 119(e). The provisional application being filed October 23, 2013, as Application No. 61/894,728.

Drawings

4. The drawings are objected to because Figures 1-3D lacks the proper cross-hatching which indicates the type of materials, which may be in an invention. Specifically, the cross hatching to indicate the conductor and insulation materials is improper. The applicant should refer to MPEP Section 608.02 for the proper cross-hatching of materials. Correction is required.

In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including

annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Specification

5. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

6. In lines 4-6, the abstract refers to purported merits or speculative applications of the invention, which is improper content for the abstract. The applicant should delete

the references to purported merits or speculative applications of the invention to provide the abstract with proper content.

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 1-20 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 9,697,929. Although the claims at issue are not identical, they are not patentably distinct from each other because all of the claimed limitations are claimed in various claims of the previous cited patent.

Claim Rejections - 35 USC § 103

9. 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 of this title, 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.

10. 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 35 U.S.C. 103 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.

11. This application currently names joint inventors. In considering patentability of the claims the examiner presumes that the subject matter of the various claims was commonly owned as of the effective filing date of the claimed invention(s) absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and effective filing dates of each claim that was not commonly owned as of the effective filing date of the later invention in order for the examiner to consider the applicability of 35 U.S.C. 102(b)(2)(C) for any potential 35 U.S.C. 102(a)(2) prior art against the later invention.

12. Claims 1-3, 9-13, and 16-18 are rejected under 35 U.S.C. 103 as being unpatentable over Clark (Pub Num 2006/0169478) in view of Roberts (Pub Num 3,622,683). Clark discloses a communications cable (Figs 2-3) that may be exposed to force, stress, rough handling, and other disturbances present in mechanically dynamic environments (Paragraph 2). With respect to claims 1-2, Clark discloses a cable (70,

Fig 2) comprising a first twisted pair of insulated conductors (50a), a second twisted pair of insulated conductors (50b), a filler (72) separating the first twisted pair of insulated conductors (50a) from the a second twisted pair of insulated conductors (50b) and may of a dielectric material (Paragraph 39), an a multi-layer conductive barrier tape (76) comprising a continuous conductive material (i.e. aluminum) contained on a layer of dielectric material (i.e. mylar, Paragraph 47), wherein the conductive material extends to lateral edges of the dielectric material (mylar) and surrounding the first twisted pair of insulated conductors (50a), a second twisted pair of insulated conductors (50b), and the filler (72). With respect to claim 3, Clark discloses that the filler has a helical twist at a first angle (i.e. cable is laid at an angle resulting in a lay length of greater than 3 inches, Paragraph 43). With respect to claim 9, Clark discloses that the first twisted pair of insulated conductors (50a) and the second twisted pair of insulated conductors (50b) have a helically twist around the filler (72) at a first angle (Paragraph 35). With respect to claims 10-13, Clark discloses that the filler (72) comprises four arms (four 75's) in a cross shape (Fig 2), wherein the arms (75's) are symmetrical terminal portions (Fig 2) and the barrier tape (76) is positioned above the terminal portion (i.e. ends) of the arms (75) of the filler (72, Fig 2). With respect to claim 16, Clark discloses that a pair of arms (adjacent 75's) of the filler (72) forms a channel (74a-74d), wherein first twisted pair of insulated conductors (50a) and second twisted pair of insulated conductors (50b) are positioned within the channels (74a & 74b). With respect to claim 17, Clark discloses that a jacket (78) surrounds the conductive barrier tape (76, Fig 8, Paragraph 48). With respect to claim 18, Clark discloses a method of manufacture of a cable (70) comprising

providing a first twisted pair of insulated conductors (50a) and second twisted pair of insulated conductors (50b), positioning a filler (72) between the first twisted pair of insulated conductors (50a) and the second twisted pair of insulated conductors (50b), and wrapping the first twisted pair of insulated conductors (50a), second twisted pair of insulated conductors (50b), and filler (72) with a conductive barrier tape (76) comprising a continuous conductive material (i.e. aluminum) contained on a layer of dielectric material (i.e. mylar, Paragraph 47), wherein the conductive material extends to lateral edges of the dielectric material (mylar).

While Clark discloses a conductive barrier tape layer a continuous conductive material (i.e. aluminum) contained on a layer of dielectric material (i.e. mylar, Paragraph 47), wherein the conductive material extends to lateral edges of the dielectric material (mylar), Clark doesn't necessarily disclose the barrier tape comprising a conductive material in-between two dielectric layers (claims 1 & 18).

Roberts teaches a communications cable (Figs 1-24), wherein the cable has a conductive barrier tape comprising an aluminum layer coated on both sides by a dielectric layer such as mylar, for the purpose of reducing crosstalk between adjacent conductors, which result from barrier tapes only having one dielectric layer laminated to aluminum (Col 3, lines 32-51). Specifically, with respect to claims 1 & 18, Roberts discloses a cable (1, Fig 1) comprising a plurality of conductors (14), wherein the conductors (14, Fig 4) may be longitudinally wrapped (Fig 1) or helically wrapped (Fig 4) with a barrier tape (5, Fig 5), wherein the barrier tape (5) comprises a continuous conductive material (i.e. aluminum, 6) contained on both sides with a layer of dielectric

material (i.e. mylar, 5a & 5a, respectively, Paragraph 47), wherein the conductive material (6) extends to lateral edges of the dielectric materials (5a, Fig 5).

It would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the cable of Clark to comprise the barrier tape configuration having two dielectric layers as taught by Roberts because Roberts teach that such a configuration provides a communications cable (Figs 1-24) that reduces crosstalk between adjacent conductors, which results from barrier tapes only having one dielectric layer laminated to aluminum (Col 3, lines 32-51).

13. Claims 4, 5, 14, and 19 are rejected under 35 U.S.C. 103 as being unpatentable over Clark (Pub Num 2006/0169478) in view of Roberts (Pub Num 3,622,683, as applied to claims 1, 3, and 18 above (herein referred to as modified Clark), further in view of Nordin et al (Pat Num 2012/0222883, herein referred to as Nordin). Modified Clark discloses a communications cable (Figs 2-3) that may be exposed to force, stress, rough handling, and other disturbances present in mechanically dynamic environments (Paragraph 2), as disclosed above with respect to claims 1, 3, 10, and 18 above.

While modified Clark teaches that the barrier tape may be helically wrapped (see Roberts, Fig 4), Clark doesn't necessarily disclose the barrier tape being helically twisted at a second angle (claim 4), nor the second angle being equal to the first angle (claim 5), nor the terminal portion of each arm being wider than a middle portion of the arm (claim 14), nor the method of helically twisting the conductive barrier tape at an angle varying between a first and second angle (claim 19).

Nordin teaches a fixed tape control high performance data cable (Figs 1-5) that reduces crosstalk (Paragraph 5). With respect to claim 4-5, Nordin discloses a fixed tape control high performance data cable (22, Fig 2) comprising a plurality of twisted pairs of insulated conductors (26); a filler (28) comprising a plurality of arms (portions extending from the center) separating each twisted pair of insulated conductors (26), wherein each arm (portions extending from the center) having a terminal portion (portion extending away from arms; one located at numerical 23); a conductive barrier tape (32) surrounding the filler (28) and plurality of twisted pairs of insulated conductors (26); and a jacket (33) surrounding the conductive barrier tape (32); wherein the filler (28) is configured in a helical twist at a first angle (Fig 5) and wherein the conductive barrier tape (32) is configured in a helical twist at the first angle (Paragraph 25, Fig 5). With respect to claim 14, Nordin teaches that the terminal portion of the arm (portion extending away from arms; one located at numerical 23) is wider than the middle portion of the arm (Fig 2). With respect to claim 16, Nordin discloses a method wherein the helically twisting the filler (28) at a first angle and helically twisting the conductive barrier tape (32) at a second angle, wherein the second angle (Fig 2) is equal to the first angle (Fig 2, Paragraph 25).

It would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the cable of modified Clark to comprise the filler and barrier tape configuration having a first twist angle equal to a second twist angle as taught by Nordin because Nordin teaches that such a configuration provides a high performance data cable (Figs 1-5) that reduces crosstalk (Paragraph 5).

14. Claims 6-8 are rejected under 35 U.S.C. 103 as being unpatentable over Clark (Pub Num 2006/0169478) in view of Roberts (Pub Num 3,622,683) and Nordin (Pat Num 2012/0222883), as applied to claims 1, 3, and 4 above (herein referred to as modified Clark), further in view of Lindstrom et al (Pub Num 2012/00227998, herein referred to as Lindstrom). Modified Clark discloses a communications cable (Figs 2-3) that may be exposed to force, stress, rough handling, and other disturbances present in mechanically dynamic environments (Paragraph 2), as disclosed above with respect to claims 1, 3, and 4 above.

While modified Clark teaches that the barrier tape may be helically wrapped (see Roberts, Fig 4), Clark doesn't necessarily disclose the barrier tape being helically twisted at a second angle, wherein the second angle varying along the length of the cable (claim 6), nor the second angle varying between a first angle and third angle (claim 7), nor the second angle varying between a first value, less than the first angle and a second value, greater than the first angle (claim 8),

Lindstrom teaches a cable (Figs 1-6) comprising a barrier tape that is applied at angles that differ between different wraps such that the barrier tape lay length varies along the length of the cable thereby cancelling out some of the imbalances generated by overlaps (Paragraph 13) thereby improving the crosstalk performance by reducing electrical noise from other signals transmitted and reducing electromagnetic radiation from the cable that may interfere with other electrical devices, while also eliminating capacitive coupling from other electrical sources (Paragraph 35). Specifically, with respect to claims 6-8, Lindstrom teaches a cable (200) comprising a plurality of twisted

pairs of insulated conductors (Fig 2), wherein the cable (200) comprises a barrier tape (115) being helically twisted at an application angle (Θ , Fig 1) varying between a second angle ($\Theta_{(n)}$) and a third angle ($\Theta_{(n+2)}$), wherein the second angle ($\Theta_{(n)}$) comprises the first angle ($\Theta_{(n+1)}$) minus a predetermined value (if $n=1$, then second angle = $\Theta_{(n+1-1)} = \Theta_{(n)}$) and wherein the third angle ($\Theta_{(n+2)}$) comprises the first angle ($\Theta_{(n+1)}$) plus a predetermined value (if $n=1$, then second angle = $\Theta_{(n+1+1)} = \Theta_{(n+2)}$) and the application angle (Θ) varies from a second angle ($\Theta_{(n)}$) and the third angle ($\Theta_{(n+2)}$) along the length of the cable (200) longer than the length of one helical twist of the conductors (Fig 1).

It would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the helically wrapping of the barrier tape of modified Clark to comprise the varying angle configuration as taught by Lindstrom because Lindstrom teaches that such a configuration provides a cable thereby cancelling out some of the imbalances generated by overlaps (Paragraph 13) thereby improving the crosstalk performance by reducing electrical noise from other signals transmitted and reducing electromagnetic radiation from the cable that may interfere with other electrical devices, while also eliminating capacitive coupling from other electrical sources (Paragraph 35) and it appears that Nordin would perform equally well with the modification.

15. Claim 15 is rejected under 35 U.S.C. 103 as being unpatentable over Clark (Pub Num 2006/0169478) in view of Roberts (Pub Num 3,622,683, as applied to claims 1 and 10 above (herein referred to as modified Clark), further in view of Blouin et al (Pat Num 6,365,836, herein referred to as Blouin). Modified Clark discloses a communications

cable (Figs 2-3) that may be exposed to force, stress, rough handling, and other disturbances present in mechanically dynamic environments (Paragraph 2), as disclosed above with respect to claims 1 and 10 above.

While modified Clark teaches that filler comprising arms, Clark doesn't necessarily disclose the terminal portion of each arm having a trapezoidal profile (claim 15).

Blouin teaches high performance data cable (Figs 3-4) having improved crosstalk performance (Col 1, lines 9-14). Specifically, with respect to claim 15, Blouin teaches discloses a high performance data cable (Fig 4) comprising a plurality of twisted pairs of insulated conductors (407); a filler (401) comprising a plurality of arms (402) separating each twisted pair of insulated conductors (407), wherein each arm (402) having a terminal portion (403), wherein the terminal portion (403) of the arm (402) has a trapezoidal profile (Fig 4).

It would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the helically wrapping of the barrier tape of modified Clark to comprise terminal portions having a trapezoidal profile as taught by Blouin because Blouin teaches that such a configuration provides a cable having improved crosstalk performance (Col 1, lines 9-14) and since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

16. Claim 20 is rejected under 35 U.S.C. 103 as being unpatentable over Clark (Pub Num 2006/0169478) in view of Roberts (Pub Num 3,622,683) and Nordin (Pat Num 2012/0222883), as applied to claim 18 above (herein referred to as modified Clark), further in view of Lindstrom et al (Pub Num 2012/00227998, herein referred to as Lindstrom). Modified Clark discloses a communications cable (Figs 2-3) that may be exposed to force, stress, rough handling, and other disturbances present in mechanically dynamic environments (Paragraph 2), as disclosed above with respect to claim 18 above.

Modified Clark doesn't necessarily disclose method of twisting the barrier tape layer varying the application angle between a first angle and a second angle (claim 20).

Lindstrom teaches a cable (Figs 1-6) comprising a barrier tape that is applied at angles that differ between different wraps such that the barrier tape lay length varies along the length of the cable thereby cancelling out some of the imbalances generated by overlaps (Paragraph 13) thereby improving the crosstalk performance by reducing electrical noise from other signals transmitted and reducing electromagnetic radiation from the cable that may interfere with other electrical devices, while also eliminating capacitive coupling from other electrical sources (Paragraph 35). Specifically, with respect to claim 20, Lindstrom teaches a cable (200) comprising a plurality of twisted pairs of insulated conductors (Fig 2), wherein the cable (200) comprises a barrier tape (115) being helically twisted at an application angle (Θ , Fig 1) varying between a first angle ($\Theta_{(n)}$) and a second angle ($\Theta_{(n+2)}$).

It would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the helically wrapping of the barrier tape of modified Clark to comprise the varying angle configuration as taught by Lindstrom because Lindstrom teaches that such a configuration provides a cable thereby cancelling out some of the imbalances generated by overlaps (Paragraph 13) thereby improving the crosstalk performance by reducing electrical noise from other signals transmitted and reducing electromagnetic radiation from the cable that may interfere with other electrical devices, while also eliminating capacitive coupling from other electrical sources (Paragraph 35) and it appears that Nordin would perform equally well with the modification.

17. Claim 20 is rejected under 35 U.S.C. 103 as being unpatentable over Nordin (Pub Num 2012/0222883) in view of Lindstrom et al (Pub Num 2012/00227998, herein referred to as Lindstrom), as applied to claim 18 above (herein referred to as modified Nordin), further in view of Smith Corp. (GB Pat Num 988,789, herein referred to as Smith). Nordin discloses a fixed tape control high performance data cable (Figs 1-5) that reduces crosstalk (Paragraph 5), as disclosed above with respect to claim 17 & 18.

However, modified Nordin doesn't specifically disclose feeding the barrier tape tangent to a roller and moving the roller bidirectional along a track in a direction at an angle to the length of the cable (claim 20).

Smith discloses a method of applying a barrier tape to an elongated object (i.e. pipe) comprising feeding the tape (2) to a distribution roller (44) attached to a pivot mechanism that includes a bracket (51), wherein the roller (44) is pivoted to apply the

tape (2) around an elongated device while varying the helix angle of the tape (2, Page 4, lines 9-17).

It would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the helically wrapping of the barrier tape of modified Nordin to comprise method of feeding the tape to a distribution roller attached to a pivot mechanism to vary the angle configuration as taught by Smith because Smith teaches that such a configuration is known in the art for providing winding of tape at various angles (Page 4, lines 9-17) and it appears that modified Nordin would perform equally well with the modification.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to the enclosed PTO-892 form for the citation of pertinent art in the present case.

Communication

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thompson can be reached on (571) 272-2342 or (571) 272-2800

ext 31. 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.

/William H. Mayo III/

William H. Mayo III
Primary Examiner
Art Unit 2847

WHM III
June 26, 2017