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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/336,535	01/03/2003	William Clark	M00506.70026.US	9466
37462	7590	06/17/2004	EXAMINER	
LOWRIE, LANDO & ANASTASI RIVERFRONT OFFICE ONE MAIN STREET, ELEVENTH FLOOR CAMBRIDGE, MA 02142			NGUYEN, CHAU N	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 06/17/2004

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

Office Action Summary	Application No.	Applicant(s)	
	10/336,535	CLARK ET AL.	
	Examiner	Art Unit	
	Chau N Nguyen	2831	

-- 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) 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 the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- 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 18 May 2004.
 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) 1,3-11 and 13-24 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 4a) Of the above claim(s) _____ is/are withdrawn from consideration.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) 1,3-11,13-17 and 19-24 is/are rejected.
 7) ☒ Claim(s) 18 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) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) ☐ Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/18/04</u> . | 6) ☐ Other: _____ |

DETAILED ACTION

Claim Objections

Claim 20 is objected to because of the following informalities: in claim 20, line 2, the recitation of the "dielectric separator does not extend more than 180 around any one of the twisted pairs" is unclear. Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. 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 negated by the manner in which the invention was made.

2. Claims 1, 3, 4, 14-17 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boucino et al. (5,969,295) in view of Simons et al. (3,911,200).

Boucino et al. discloses a communications cable comprising a plurality of twisted pairs of insulated conductors comprising a first twisted pair of insulated conductors and a second twisted pair of insulated conductors, a separator being disposed between the pairs to separate the first twisted pair from the second twisted pair, a jacket enclosing the plurality of twisted pairs of insulated conductors and

the separator (Figs 2 and 3), the separator and the twisted pairs being twisted about a common central axis to form a twisted pair cable. Boucino et al. does not disclose the separator being a substantially flat (re claim 1).

Simons et al. discloses a substantially flat configurable dielectric separator which is arranged to provide a plurality of grooves (Figs 6, 7, 11, 12) extending along a length of the cable (re claim 3). It would have been obvious to one skilled in the art to use the separator as taught by Simons et al. for the separator of Boucino et al. since the separator of Simons not only separate the pairs but also provides a shielding for the pairs.

The modified cable of Boucino et al. also discloses the separator being arranged within the jacket to provide at least two grooves, at least one twisted pair being disposed within each of the grooves (re claim 4), the separator being arranged so as to separate each pair from every other pair (re claim 14), the separator being arranged to provide sufficient spacing between the first pair and the second pair so as to provide a desired cross-talk isolation between the first and second pairs (re claim 17), the substantially flat configurable dielectric separator having a concave shape (re claim 19) and not extending more than 180 degrees around any one of the twisted pairs (re claim 20). Re claims 15-16, Simons et al. discloses the separator comprising an aluminum/Mylar tape (10,11), but does not

disclose the aluminum layer facing the twisted pairs. However, it would have been obvious to one skilled in the art at the time the invention was made to have the aluminum layer of Simons et al. in the modified cable of Boucino et al. facing the twisted pairs since it has been held that merely reversing the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167. Re claim 21, it would have been obvious to one skilled in the art to use foamed polymer for the dielectric in the separator of Boucino et al. since foamed polymer is known in the art for being used as dielectric material because of its low dielectric constant.

3. Claims 5, 7-9 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boucino et al. in view of Simons et al. as applied to claim 1 above, and further in view of C&M Corporation (C&M).

Claims 5, 7-9 and 22-24 additionally recite the separator including a foamed FEP. C&M discloses known materials for being used as insulation materials. C&M discloses that foamed FEP has low dielectric constant and good flame resistance. Therefore, it would have been obvious to one skilled in the art to use foamed FEP for the dielectric separator of Simons et al. in the modified cable of

Boucino et al. since foamed FEP has low dielectric constant and good flame resistance as taught by C&M.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boucino et al. in view of Simons et al. as applied to claim 1 above, and further in view of Coleman (3,649,744).

Claim 6 additionally recites the separator including a woven fiberglass tape. Coleman discloses an electric cable comprising a woven fiberglass tape. It would have been obvious to one skilled in the art to use woven fiberglass tape in the separator of the modified Boucino et al. cable to improve reliability of the cable as taught by Coleman.

5. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boucino et al. in view of Simons et al. as applied to claim 1 above, and further in view of Gareis et al. (5,789,711).

Claims 10 and 11 additionally recite a central core filling material being disposed in a core of the cable between the first and second pairs, wherein the central core filling material being made of the same material as the separator. Gareis et al. discloses a cable comprising a central core filling material (33) being

disposed in a core of the cable between the first and second pairs, wherein the central core filling material being made of the same material as the separator (12). It would have been obvious to one skilled in the art to apply the teaching of Gareis et al. in the modified cable of Boucino et al. to improve the cable strength.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boucino et al. in view of Simons et al. as applied to claim 1 above, and further in view of Prudhon (5,952,615).

Claim 13 additionally recites a conductive shield substantially surrounding the twisted pairs and the separator. Prudhon discloses a cable comprising a conductive shield (Fig. 3) substantially surrounding a plurality of twisted pairs and a separator. It would have been obvious to one skilled in the art to provide a conductive shield as taught by Prudhon in the cable of Boucino et al. to provide a complete shield around the twisted pairs.

Allowable Subject Matter

7. Claim 18 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.

8. The following is a statement of reasons for the indication of allowable subject matter: claim 18 could have been rejected under Double Patenting Rejection in view of claim 1 of Patent No. 6,248,954. However, a Terminal Disclaimer was filed May 18th 2004 and which is proper and has been recorded.

Response to Arguments

9. Applicant's arguments filed May 18th 2004 have been fully considered but they are not persuasive.

Applicant first argues that Boucino et al. discloses an unshielded cable using a non-conductive spacer and makes absolutely no mention of any shield. By contrast, Simons et al. discloses a conductive shielding tape. Therefore, one of ordinary skill in the art would not be motivated to use the conductive tape taught by Simons et al. in the unshielded cable of Boucino et al. This argument is not found persuasive. First of all, Boucino et al. does not specifically disclose that his cable is an unshielded cable nor absolutely no shield is allowed in his cable as argued by the applicant. Second of all, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the

references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicant then argues that neither Boucino et al. nor Simons et al. discloses a "substantially flat configurable dielectric separator". Applicant further states that although the separator of Simons et al. is formed as a tape laminate, the separator is not substantially flat when it is disposed inside the cable. In response to this argument, just for the purpose of providing a plurality of grooves within the cable jacket, the substantially flat configurable dielectric separator of Simons et al. is folded to form a finned separator. Nonetheless, the dielectric separator disclosed by Simons et al., see Figures 6 and 8-10, is a substantially flat configurable dielectric separator. Furthermore, as evidence by the claimed invention, the claimed dielectric separator is flat, however because of providing a plurality of grooves within the cable jacket, the claimed substantially flat configurable dielectric separator is arranged (or folded) within the jacket to form a finned separator.

Summary

10. **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.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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).



Chau N Nguyen
Primary Examiner
Art Unit 2831