

UTILITY PATENT APPLICATION TRANSMITTAL (Only for new nonprovisional applications under 37 CFR 1.53(b))	Attorney Docket No.	G13569-00485-HM
	First Named Inventor	PILON, Vincent
	Title	MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD
	Priority Mail Express® Label No.	

APPLICATION ELEMENTS <i>See MPEP chapter 600 concerning utility patent application contents.</i>	Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450
1. ☐ Fee Transmittal Form (PTO/SB/17 or equivalent)	ACCOMPANYING APPLICATION PAPERS
2. ☐ Applicant asserts small entity status. See 37 CFR 1.27	10. ☐ Assignment Papers (cover sheet & document(s)) Name of Assignee _____
3. ☐ Applicant certifies micro entity status. See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent.	11. ☒ 37 CFR 3.73(c) Statement ☒ Power of Attorney (when there is an assignee)
4. ☒ Specification [Total Pages 12] Both the claims and abstract must start on a new page. (See MPEP § 608.01(a) for information on the preferred arrangement)	12. ☐ English Translation Document (if applicable)
5. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 13]	13. ☒ Information Disclosure Statement (PTO/SB/08 or PTO-1449) ☐ Copies of citations attached
6. Inventor's Oath or Declaration [Total Pages _____] (including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e))	14. ☐ Preliminary Amendment
a. ☐ Newly executed (original or copy)	15. ☐ Return Receipt Postcard (MPEP § 503) (Should be specifically itemized)
b. ☒ A copy from a prior application (37 CFR 1.63(d))	16. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
7. ☒ Application Data Sheet * See note below. See 37 CFR 1.76 (PTO/AIA/14 or equivalent)	17. ☐ Nonpublication Request Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
8. CD-ROM or CD-R in duplicate, large table, or Computer Program (Appendix) ☐ Landscape Table on CD	18. ☐ Other: _____
9. Nucleotide and/or Amino Acid Sequence Submission (if applicable, items a. – c. are required)	
a. ☐ Computer Readable Form (CRF)	
b. ☐ Specification Sequence Listing on:	
i. ☐ CD-ROM or CD-R (2 copies); or	
ii. ☐ Paper	
c. ☐ Statements verifying identity of above copies	
*Note: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 must be included in an Application Data Sheet (ADS). (2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).	

19. CORRESPONDENCE ADDRESS					
☒ The address associated with Customer Number: 25545 OR ☐ Correspondence address below					
Name _____					
Address _____					
City _____		State _____		Zip Code _____	
Country _____		Telephone _____		Email _____	
Signature /HUGH MANSFIELD/		Date September 2, 2020			
Name (Print/Type) Hugh Mansfield		Registration No. (Attorney/Agent) 55757			

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD		
First Named Inventor/Applicant Name:		Vincent PILON		
Filer:		Hugh Mansfield/Regeline Jean Francois		
Attorney Docket Number:		G13569-00485-HM		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	300	300
UTILITY SEARCH FEE	1111	1	660	660
UTILITY EXAMINATION FEE	1311	1	760	760
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1720

Electronic Acknowledgement Receipt	
EFS ID:	40453514
Application Number:	17010113
International Application Number:	
Confirmation Number:	1019
Title of Invention:	MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Vincent PILON
Customer Number:	25545
Filer:	Hugh Mansfield/Regeline Jean Francois
Filer Authorized By:	Hugh Mansfield
Attorney Docket Number:	G13569-00485-HM
Receipt Date:	02-SEP-2020
Filing Date:	
Time Stamp:	13:48:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$1720
RAM confirmation Number	E202092D49119212
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	2501-USPTO-ADS.pdf	1861398	no	8
			e0593b35728b59d3883432a189ef3402a19cbd40		
Warnings:					
Information:					
2		2501-USPTO-APPLICATION-Cassette-As-Div-Filed.pdf	59836	yes	12
			68c8d6c209f5e96fc5f191162dfed62c5441d48d		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Abstract		12	12	
	Claims		9	11	
	Specification		1	8	
Warnings:					
Information:					
3	Drawings-only black and white line drawings	2501-USPTO-Figures.pdf	1277660	no	13
			d40684aa031dff1736e1c9e216a2fafa1eb45977		
Warnings:					
Information:					
4	Oath or Declaration filed	2501-Declaration-Pilon.pdf	329983	no	1
			b03cabdc4b06828ffcced6c90400b5f7441bf53d		
Warnings:					
Information:					
5	Power of Attorney	Power-of-Attorney.pdf	341776	no	1
			fe0c913d90d439d6909d97576ff7a842b9791230		

Warnings:					
Information:					
6	Assignee showing of ownership per 37 CFR 3.73	Statement.pdf	3466268	no	5
			af8010965e5980b5e60e1e2b75c1197ee151d15a		
Warnings:					
Information:					
7	Information Disclosure Statement (IDS) Form (SB08)	2501-USPTO-IDS.pdf	1057668	no	5
			ec9569fd60c07ead13aa939be79c8b3d542ff23c		
Warnings:					
Information:					
8	Transmittal of New Application	2501-USPTO-Transmittal.pdf	281783	no	2
			78f6bd4371b6de06afb8a7da902f098e7efc2f93		
Warnings:					
Information:					
9	Fee Worksheet (SB06)	fee-info.pdf	35122	no	2
			67312eeaf41f20b8607ec3255908b0e452e39589		
Warnings:					
Information:					
Total Files Size (in bytes):			8711494		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	G13569-00485-HM
		Application Number	
Title of Invention	MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
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Inventor Information:

Inventor	1				Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	VINCENT		PILON			
Residence Information (Select One) US Residency • Non US Residency Active US Military Service						
City	LACHINE	Country of Residence ⁱ	CA			
Mailing Address of Inventor:						
Address 1	350 40e AVENUE					
Address 2						
City	LACHINE	State/Province	QC			
Postal Code	H8T 2G6	Country ⁱ	CA			
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.						
Add						

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence information of this application.			
Customer Number	25545		
Email Address	hmansfield@lavery.ca	Add Email	Remove Email
Email Address	uspatents@lavery.ca	Add Email	Remove Email

Application Information:

Title of the Invention	MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD		
Attorney Docket Number	G13569-00485-HM	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	13	Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	G13569-00485-HM
		Application Number	
Title of Invention	MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD		

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	☒ Customer Number	US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	25545		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	16143831	2018-09-27

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	G13569-00485-HM
		Application Number	
Title of Invention	MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD		
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
16143831	Claims benefit of provisional	62567339	2017-10-03
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Remove
			Access Code ⁱ (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	G13569-00485-HM
		Application Number	
Title of Invention	MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	G13569-00485-HM
		Application Number	
Title of Invention	MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.			
Applicant	1		Remove
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.			
Clear			
Assignee	Legal Representative under 35 U.S.C. 117		Joint Inventor
☐ Person to whom the inventor is obligated to assign.		☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
Name of the Deceased or Legally Incapacitated Inventor:			
If the Applicant is an Organization check here. ☒			
Organization Name	BELDEN CANADA ULC		
Mailing Address Information For Applicant:			
Address 1	2310 ALFRED-NOBEL		
Address 2			
City	SAINT-LAURENT	State/Province	QC
Country	CA	Postal Code	H4S 2B4
Phone Number		Fax Number	
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button. Add			

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	G13569-00485-HM
		Application Number	
Title of Invention	MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD		

Assignee	1			
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
Remove				
If the Assignee or Non-Applicant Assignee is an Organization check here. ☐				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country i		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add				

Signature:	Remove			
NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).				
This Application Data Sheet must be signed by a patent practitioner if one or more of the applicants is a juristic entity (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, all joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of all joint inventor-applicants.				
See 37 CFR 1.4(d) for the manner of making signatures and certifications.				
Signature	/HUGH MANSFIELD/		Date (YYYY-MM-DD)	2020-09-02
First Name	HUGH	Last Name	MANSFIELD	Registration Number
				55757
Additional Signature may be generated within this form by selecting the Add button. Add				

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	G13569-00485-HM
		Application Number	
Title of Invention	MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
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Abstract

A fiber optic cassette system is disclosed comprising a case defining a tray receiving space and an opening to a space, a tray received within the case for movement between a stored position wherein the tray is inside the case and an accessible position wherein a front end of the tray is in front of the opening and outside of the case, fiber optic cassettes arrangeable side by side along the tray front end, a first of the cassettes comprising a width of one of one, two, three, four or six standard width units and a second of the cassettes comprising a width different from the first cassette width and one of one, two, three, four or six standard width units, and a fastener for removeably the cassettes to the tray. When arranged on the tray each of said selected cassettes is directly adjacent at least one other selected cassette.

Claims

1. A modular fiber optic cassette system, the system comprising:
a case comprising a top and a bottom wall and two opposed side walls, each of said sidewalls attached between respective side edges of said top and bottom wall, said walls together defining a tray receiving space there between and a forward edge of each said wall together defining an opening to said tray receiving space;
at least one tray slideably received within said tray receiving space for movement between a stored position wherein said tray is completely inside said tray receiving space and an accessible position wherein a front end of said tray is in front of said opening and outside of said tray receiving space;
a set of fiber optic cassettes, a selected plurality of the cassettes arrangeable side by side along said tray front end wherein each of said cassettes comprises a plurality of optic plug receiving receptacles arranged side by side in a row along a front thereof, a first of said set of cassettes comprising a first cassette width of one of one, two, three, four and six standard width units and a second of said cassettes comprising a second cassette width different from said first cassette width and one of one, two, three, four and six standard width units; and
a fastener for removeably securing each of said cassettes to said tray wherein when arranged on the tray each of said selected cassettes is directly adjacent at least one other selected cassette.
2. The modular fiber optic cassette system of Claim 1, wherein said tray has a width dimensioned to receive at least twelve standard width units side by side.
3. The modular fiber optic cassette system of Claim 1, wherein each of said cassettes comprises a multi fiber connector receiving receptacle arranged on

a rear thereof and a plurality of optic fibers, one of said optic fibers interconnecting a respective one of said optic plug receiving receptacles with said multi fiber connector receiving receptacle.

4. The modular fiber optic cassette system of Claim 1, wherein each of said cassettes comprises four fiber optic plug receiving receptacles arranged side by side in a row along a front thereof for each standard width unit.

5. The modular fiber optic cassette system of Claim 1, wherein said system is for mounting in a rack and further comprising a pair of mounting brackets, one of said brackets attached to each of said sidewalls on either side of an outside of said case, said mounting brackets for securing said case to the rack.

6. The modular fiber optic cassette system of Claim 1, wherein said tray is manufactured from a ferrous metal and said fastener comprises a magnet.

7. The modular fiber optic cassette system of Claim 1, further comprising at least one elongate cable management bracket comprising a cable management loop and a fastener for removeably securing said at least one bracket to said tray, said bracket having a bracket width of one of said standard width units and further wherein when installed on said tray adjacent an installed one of said cassettes, said cable management loop is positioned in front of and to a side of said plurality of optic plug receiving receptacles of said installed cassette.

8. A method for organising a tray comprising a front edge in a fiber optic interconnect system, the method comprising:

defining a standard width unit wherein a width of the front edge is substantially evenly divisible by said standard width unit;

selecting a plurality of cassettes for installation on the tray from a set of cassettes having a plurality of different widths, wherein each of said

different widths is evenly divisible by said standard width unit; and
releasably securing said selected cassettes along the front edge of the tray;
wherein when arranged on the tray each of said selected cassettes is directly
adjacent at least one other selected cassette.

9. The method for organising a tray of Claim 8, wherein said set of cassettes comprises cassettes comprising widths of one, two, three, four and six standard width units.

10. The method for organising a tray of Claim 8, wherein said selected cassettes all comprise the same width.

11. The method for organising a tray of Claim 8, wherein said selected cassettes comprise a first cassette having a first width and a second cassette having a second width different from said first width.

12. The method for organising a tray of Claim 8, wherein the width of the front edge is substantially evenly divisible by a maximum of twelve (12) of said standard width units.

13. The method for organising a tray of Claim 11, wherein said selected cassettes further comprise a third cassette comprising a third width different from said first width and said second width.

TITLE OF THE INVENTION

MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation application of U.S. patent application Serial No. 16/143,831 filed on September 27, 2018 and claims priority under 35 USC §119(e) of US provisional application serial No. 62/567,339 filed on October 3, 2017 which is incorporated herein in its entirety by reference.

FIELD OF THE INVENTION

[0001] The present invention relates to a modular fiber optic cassette, system and method. In particular, the present invention relates to a fiber optic cassette comprising a width of one or more standard width units and such that fiber optic cassettes of different widths can be arranged on the same tray while optimizing the use of tray space.

BACKGROUND OF THE INVENTION

[0002] The prior art discloses fiber optic cassettes or splice boxes for use in terminating fiber optic trunk cables and splitting them out to patch cables which are removeably arranged on tray systems within a rack mounted case. One drawback of these cassettes and tray systems is that they are typically preconfigured to terminate fiber optic cables comprising a single predetermined number of optic fibers. Another drawback is that cassettes which are used to terminate fiber optic cables comprising different numbers of optic fibers are generally incompatible with one another and additionally require trays with different spacing, securing mechanisms and the like.

SUMMARY OF THE INVENTION

[0003] In order to address the above and other drawbacks there is provided a modular fiber optic cassette system. The system comprises a case comprising a top and a bottom wall and two opposed side walls, each of the sidewalls attached between respective side edges of the top and bottom wall, the walls together defining a tray receiving space there between and a forward edge of each the wall together defining an opening to the tray receiving space, at least one tray slideably received within the tray receiving space for movement between a stored position wherein the tray is completely inside the tray receiving space and an accessible position wherein a front end of the tray is in front of the opening and outside of the tray receiving space, a set of fiber optic cassettes, a selected plurality of the cassettes arrangeable side by side along the tray front end wherein each of the cassettes comprises a plurality of optic plug receiving receptacles arranged side by side in a row along a front thereof, a first of the set of cassettes comprising a first cassette width of one of one, two, three, four and six standard width units and a second of the cassettes comprising a second cassette width different from the first cassette width and one of one, two, three, four and six standard width units, and a fastener for removeably securing each of the cassettes to the tray. When arranged on the tray each of said selected cassettes is directly adjacent at least one other selected cassette.

[0004] Additionally, there is provided a method for organising a tray comprising a front edge in a fiber optic interconnect system. The method comprises defining a standard width unit wherein a width of the front edge is substantially evenly divisible by the standard width unit, selecting a plurality of cassettes for installation on the tray from a set of cassettes having a plurality of different widths, wherein each of the different widths is evenly divisible by the standard width unit, and releasably securing the selected cassettes along the front edge of the tray. When arranged on

the tray each of said selected cassettes is directly adjacent at least one other selected cassette.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] Figure 1 provides a right front perspective view of a modular fiber optic cassette and system mounted in a rack and in accordance with an illustrative embodiment of the present invention;

[0006] Figures 2A and 2B provide respectively a raised right front perspective view and a lowered right front perspective view of a modular fiber optic cassette in accordance with an illustrative embodiment of the present invention;

[0007] Figure 3 provides a front plan view of a modular fiber optic cassette system mounted in a rack in accordance with an illustrative embodiment of the present invention;

[0008] Figures 4A through 4D provide raised right front perspective views of a tray populated with respectively six (6), four (4), three (3) and two (2) cassettes of different widths;

[0009] Figure 5A, 5B and 5C provide front plan views of a modular fiber optic cassette and system mounted in a rack respectively in accordance with first, second and third alternative embodiments of the present invention;

[0010] Figures 6A and 6B provide respectively a raised right front perspective view and a lowered right front perspective view of a modular fiber optic cassette in accordance with an alternative illustrative embodiment of the present invention; and

[0011] Figures 7A and 7B provide respectively a raised right front perspective view

of a tray comprising a plurality modular fiber optic cassettes and a pair of cable management brackets and lowered right front perspective view of a cable management bracket in accordance with a second alternative illustrative embodiment of the present invention.

DETAILED DESCRIPTION OF THE ILLUSTRATIVE EMBODIMENTS

[0012] Referring now to Figure 1, a modular cassette system, generally referred to using the reference numeral 10, will now be described. The modular cassette comprises a slideable tray 12 illustratively mounted within a case 14. The case 14 comprises a top wall 16, a bottom wall 18 and a pair of opposed side walls 20 defining a tray receiving space 22 therebetween. The case 14 is illustratively mounted to the rails 24 of a rack via a pair of mounting brackets 26 wherein one of the brackets 26 is attached to an outer surface 28 of a respective one of the sidewalls 20. The front edges 30 of the walls 16, 18, 20 define an opening via which the tray receiving space 22 can be accessed. In a particular illustrated embodiment the system 10 is shown for mounting in a 19" rack, however in a particular embodiment the system 10, with suitable modifications, may be mounted equally in a cross connect system, fiber bay or wall mount or the like.

[0013] Referring to Figures 2A and 2B in addition to Figure 1, the tray 12 receives a plurality of removable fiber optic module or cassettes 32 arranged side by side on an upper surface 34 thereof. In a first embodiment each fiber optic cassette 32 is secured to the tray 12 using a fastener comprising tabs 36 of inverted "T" cross section which engage with respective slots 38 machined or otherwise formed in the tray 12. A flexible tab 40 is also provided which comprises a boss 42 that engages a respective aperture 44 machined or otherwise formed in the tray 12 when the tabs 36 are engaged within their respective slots 38, thereby releasably securing the cassette 32 to the tray 12. In order to better orient the cassette 36 on the tray during installation, the tray 12 comprises a raised shoulder 46 which is received within a

channel 48 moulded or otherwise formed in an underside 50 of the cassette 32.

[0014] Still referring to Figures 2A and 2B, each cassette 32 illustratively comprises a plurality of receptacle modules 52 each comprising a plurality of receptacles 54, illustratively LC Quad type receptacles, arranged in a row and exposed along a forward edge 56 of the cassette 32. The cassette 32 also illustratively terminates a fiber optic cable 58, such as a trunk cable or the like, comprising a plurality of optic fibers at a multi-fiber connector receiving receptacle 60 on a rearward edge. Each optic fiber of the fiber optic cable 58 is interconnected with a respective one of the receptacles 54 using an optic fiber segment 62 comprising a receptacle end which is terminated by a plug 64. The segments 62, which are typically longer than the distance between the forward edge and the rearward edge, are typically looped several times within the cassette 32, for example in a serpentine or the like. A person of ordinary skill in the art will understand that an optic fiber terminated with a plug (not shown) inserted into a selected one of the receptacles 54 will interconnect the optic fiber with a selected optic fiber segment 62.

[0015] Referring now to Figure 3 and Figures 4A through 4D, as discussed above, each cassette 32 illustratively comprises a plurality of receptacle modules 52 each comprising four (4) receptacles 54. It is foreseen to provide a set of four (4) different cassette sizes to accommodate terminating fiber optic cables comprising different number of optic fibers. Each of the different cassette sizes of the set is based on an integer multiple of a standardised pitch or width unit W wherein one standardized width unit accommodates a single receptacle module 52 comprising four (4) receptacles 54. Illustratively, a $2W$ cassette 32 comprising two (2) modules 52 accommodating eight (8) optic fibers (Figure 4A) is provided, a $3W$ cassette 32 comprising three (3) modules 52 accommodating twelve (12) optic fibers (Figure 4B) is provided, a $4W$ cassette 32 comprising four (4) modules 52 accommodating sixteen (16) optic fibers (Figure 4C) is provided and a $6W$ cassette 32 comprising six (6) modules 52 accommodating twenty-four (24) optic fibers (Figure 4D) is

provided for. The 2W, 3W, 4W and 6W cassettes 32 are typically used only with like cassettes 32 as illustrated and such that respectively six (6), four (4), three (3) and two (2) cassettes fit snugly side by side on the 12W tray, although in a particular embodiment cassettes 32 of different widths could be used together.

[0016] Although the present illustrative embodiment In a particular embodiment the pitch/width W is based on a LC Quad (SC Duplex) technology footprint comprising four (4) connectors, in an alternative embodiment the pitch/width W could be based on a different technology footprint, including SC Duplex comprising two (2) connectors and MPO type connectors comprising *inter alia* multiple optic fibers such as MPO-12, MPO-16 and MPO-24.

[0017] Still referring to Figures 3, 4A through 4D in addition to Figure 1, a person of ordinary skill in the art will now understand that the disclosed system of cassettes 32 can be used to accommodate optic fiber cables 58 comprising different numbers of optic fibers 62 while ensuring that the same number of optic fibers 62 are accessible via the exposed receptacles 54.

[0018] Referring back to Figure 1, the spacing between adjacent slots 38 as well as the spacing between adjacent apertures 44 conforms to the standardised width unit W and such that the 2W, 3W, 4W and 6W cassettes 32 can be readily accommodated on the tray.

[0019] Referring now to Figure 5A, in a first alternative embodiment of the system each receptacle modules 52 comprises a duplex type module arranged vertically. Additionally in a first cassette size four (4) of such duplex modules 52 are provided to provide for eight (8) receptacles 54 for terminating a fiber optic cable (not shown) comprised of eight (8) optic fibers. Similar to the first embodiment discussed above, sizes for twelve (12), sixteen (16) and twenty four (24) receptacles are also provided. Again, as the width of the cassettes is an integer multiple of the same pitch/width,

cassettes of different widths can be used in the same tray system or in some cases on the same tray without modification or changing the density of the receptacles 54 for terminating optic fibres.

[0020] Referring now to Figure 5B, in a second alternative embodiment of the system each receptacle modules 52 comprises a Quad type module arranged vertically. In a first cassette size two (2) of such quad modules 52 are provided to provide for eight (8) receptacles 54 for terminating a fiber optic cable (not shown) comprised of eight (8) optic fibers. Cassettes comprising three (3), four (4) and six (6) quad type modules 52 are provided to provide respectively twelve (12), sixteen (16) and twenty-four (24) receptacles. Again, as the width of the cassettes is an integer multiple of the same pitch/width, cassettes of different widths can be used in the same tray system or in some cases on the same tray without modification or changing the density of the receptacles 54 for terminating optic fibres.

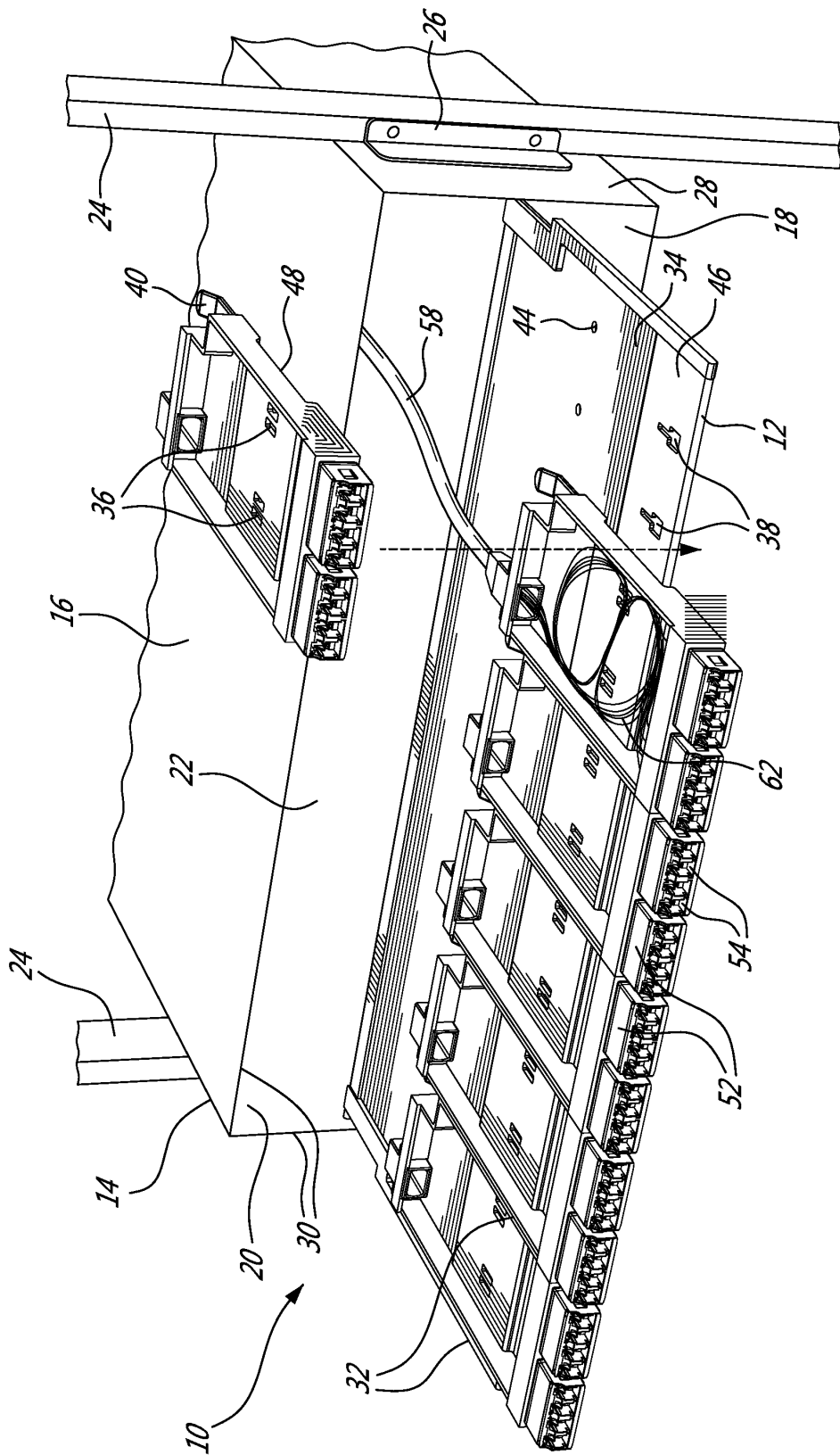
[0021] Referring now to Figure 5C, in a third alternative embodiment of the system each receptacle modules 52 comprises a duplex type module arranged horizontally in two rows. In a first cassette size four (4) of such duplex modules 52 are provided to provide for eight (8) receptacles 54 for terminating a fiber optic cable (not shown) comprised of eight (8) optic fibers. Cassettes comprising six (6), eight (8) and twelve (12) duplex type modules 52 are provided to provide respectively twelve (12), sixteen (16) and twenty-four (24) receptacles. Again, as the width of the cassettes is an integer multiple of the same pitch/width, cassettes of different widths can be used in the same tray system or in some cases on the same tray without modification or changing the density of the receptacles 54 for terminating optic fibres.

[0022] Referring now to Figures 6A and 6B in addition to Figure 1, in an alternative embodiment of an assembly for securing the cassettes 32 to the tray 12 the tray 12 is manufactured from a ferrous material such as steel or the like and the fastener comprises a magnet 66 which is attracted to the tray and embedded or otherwise

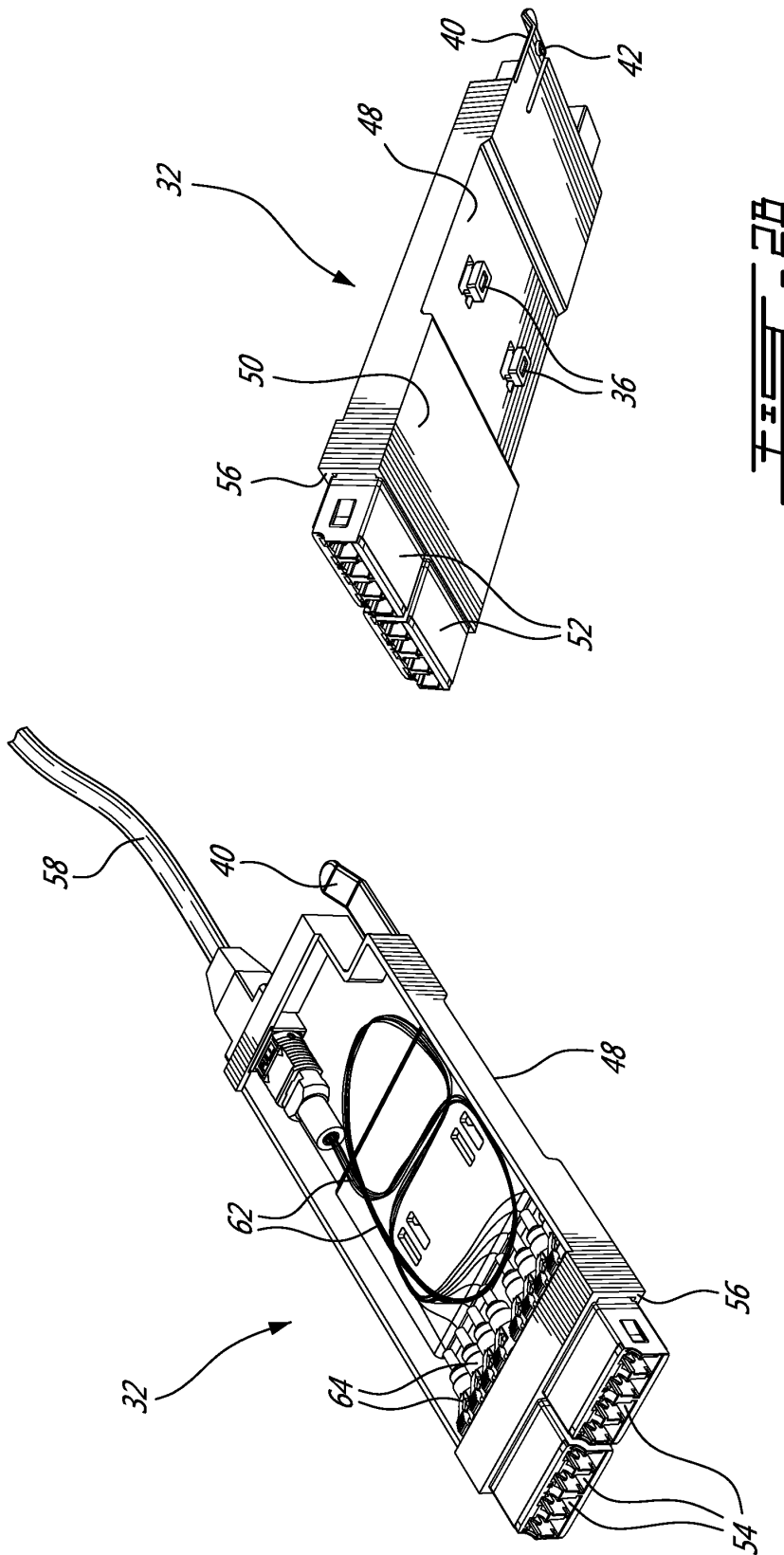
secured within a recess 68 formed in the underside 50 of the cassette 32. The tray 12, further comprises a series of spaced slots 70 arranged along the raised shoulder 46 which engage bosses 72 to ensure correct positioning of the cassettes 32 on the tray 12.

[0023] Referring now to Figure 7A in a second alternative illustrative embodiment other equipment, such as a cable management bracket 74 can be provided with the same width W and such that they can be mounted to together with the cassettes 32 to the tray 12. In this regard, and with reference to Figure 7B in addition to Figure 7, the cable management bracket 74 is provided with tabs 76 comprising an inverted “T” cross section which engage with engage a slot 38 on the tray 12. A flexible tab 78 is provided which comprises a boss 80 that engages one of the apertures 44 in the tray 12 when the tab 76 is engaged within its respective slot 38, thereby releasable securing the cable management bracket 74 to the tray 12. In order to better orient the cable management bracket 74 on the tray during installation, the raised shoulder 46 of the tray 12 is received within a channel 82 moulded or otherwise formed in the underside 84 of the cable management bracket 74. Additionally, each cable management bracket 74 includes a cable management loop 86 for receiving a plurality of optic fibres (not shown) which are terminated at respective ones of the receptacles 54. A flexible strip 88 across the mouth of the cable management loop 86 is provided to releasably retain the plurality of optic fibers within the loop 86.

[0024] Although the present invention has been described hereinabove by way of specific embodiments thereof, it can be modified, without departing from the spirit and nature of the subject invention as defined in the appended claims.



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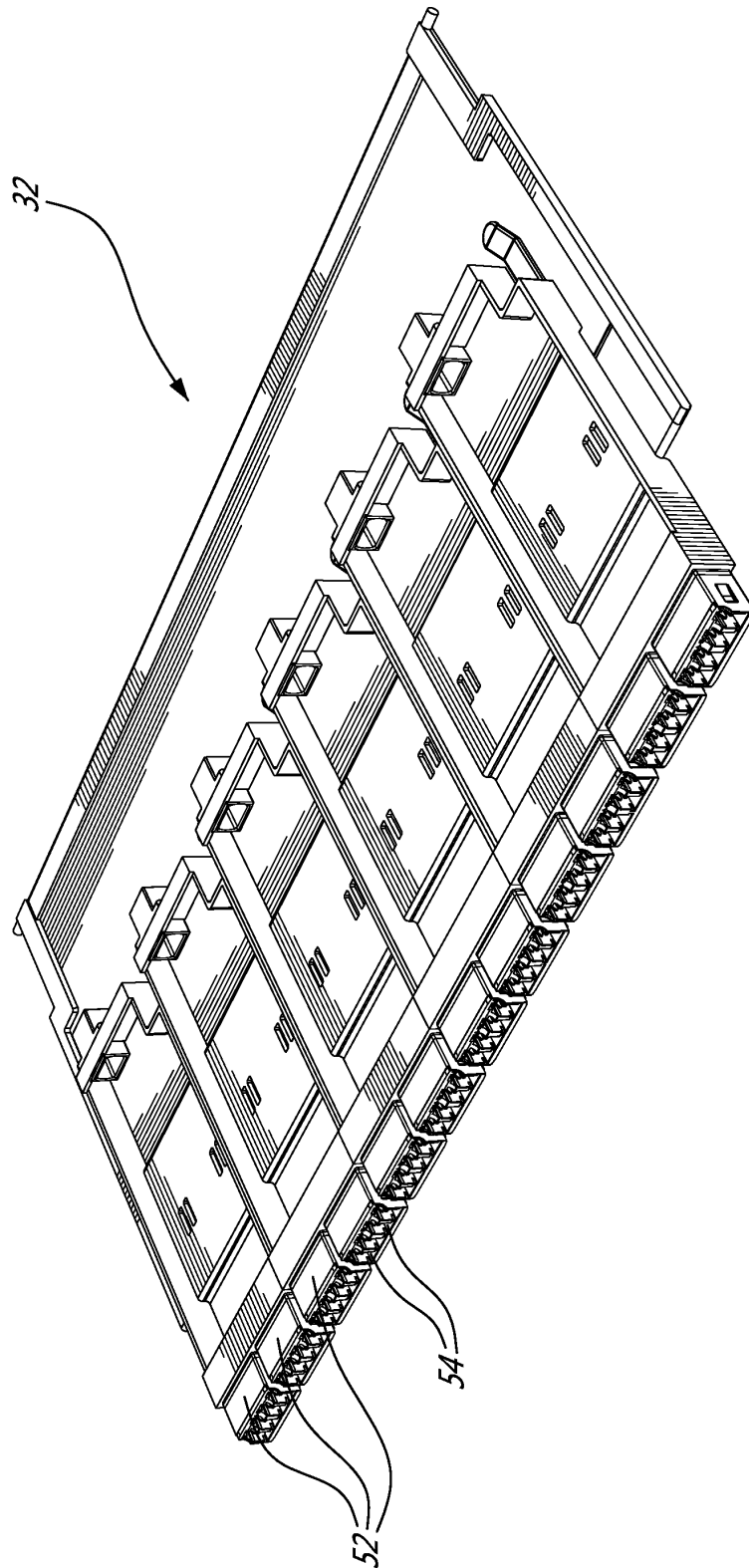


FIG. 4A

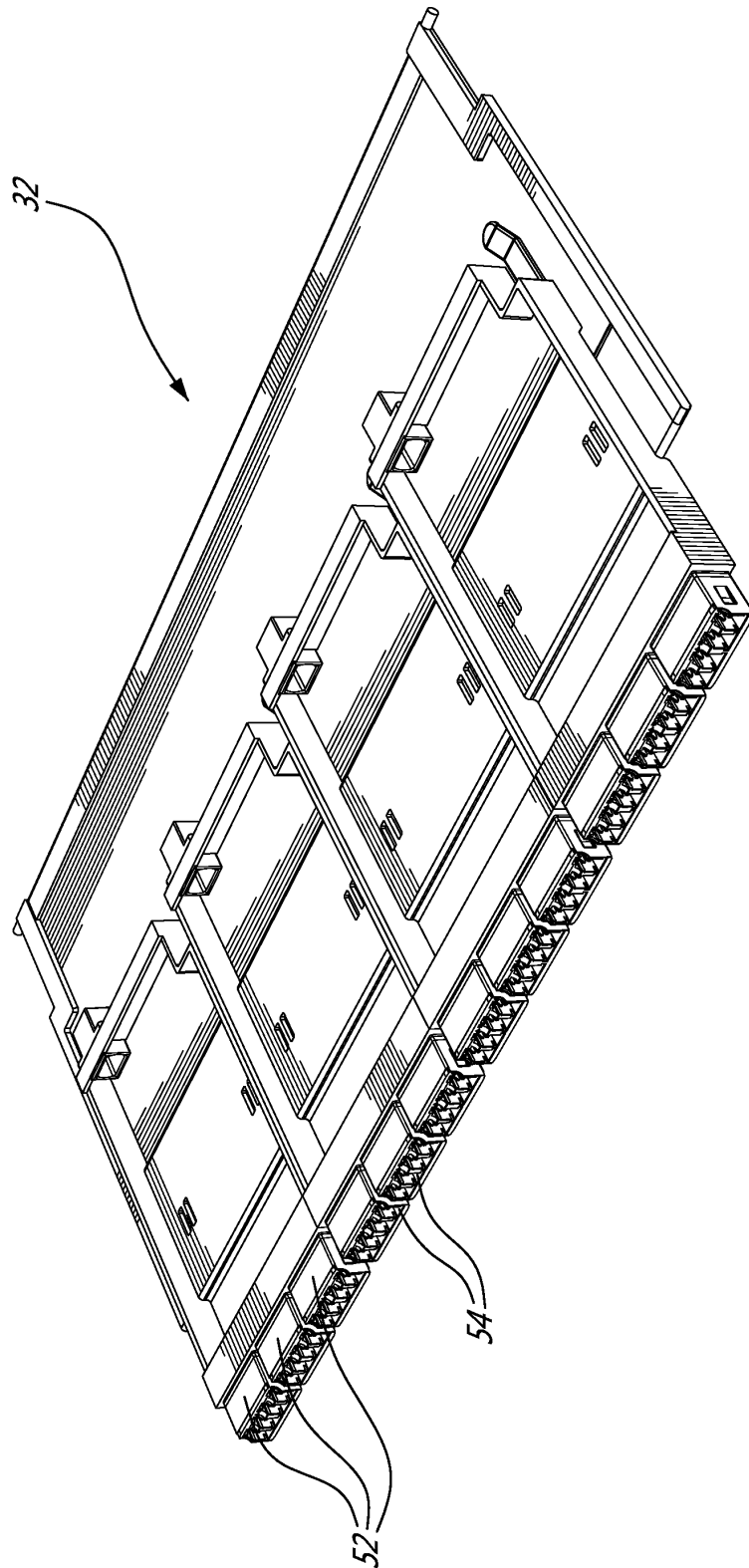


FIG. 4B

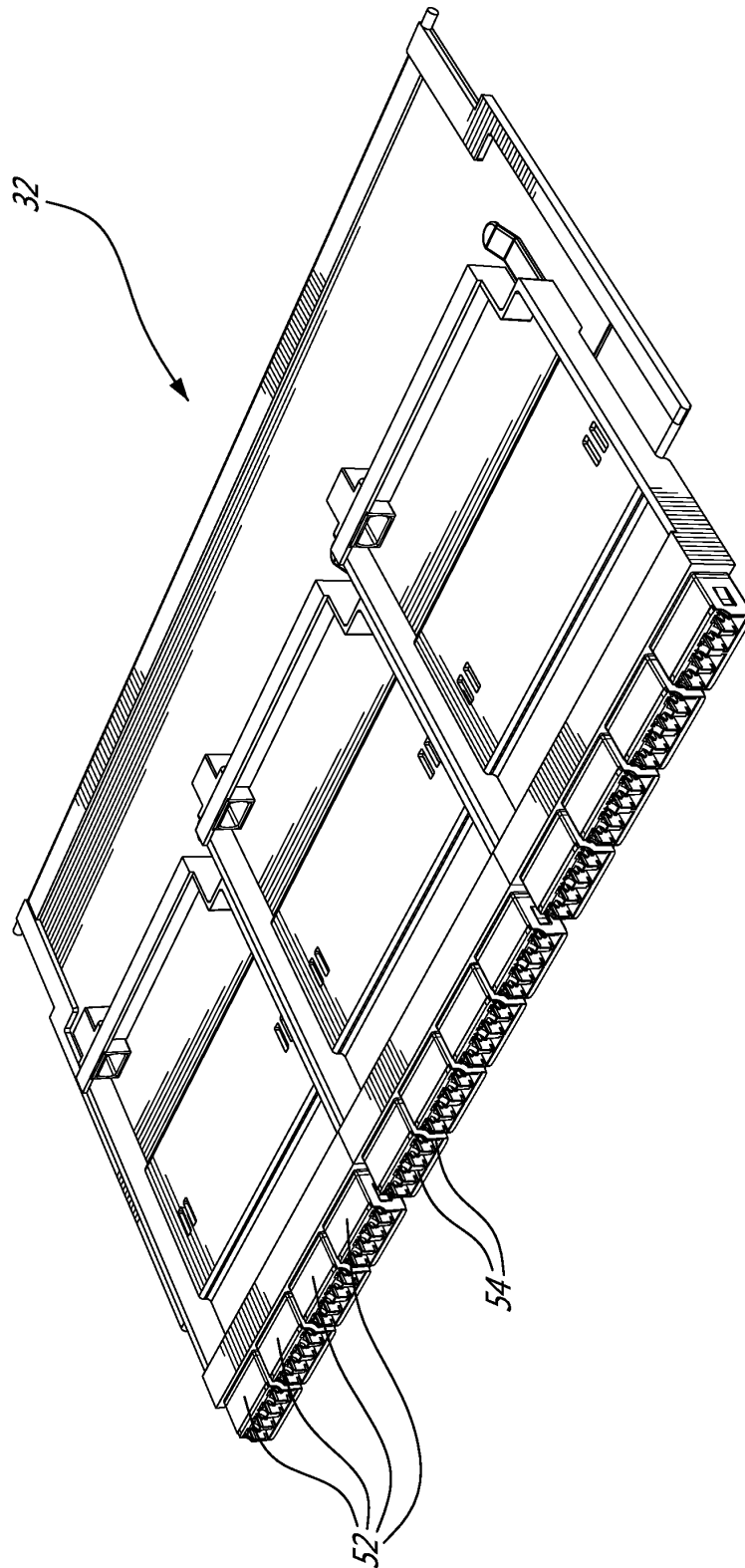


FIG. 4C

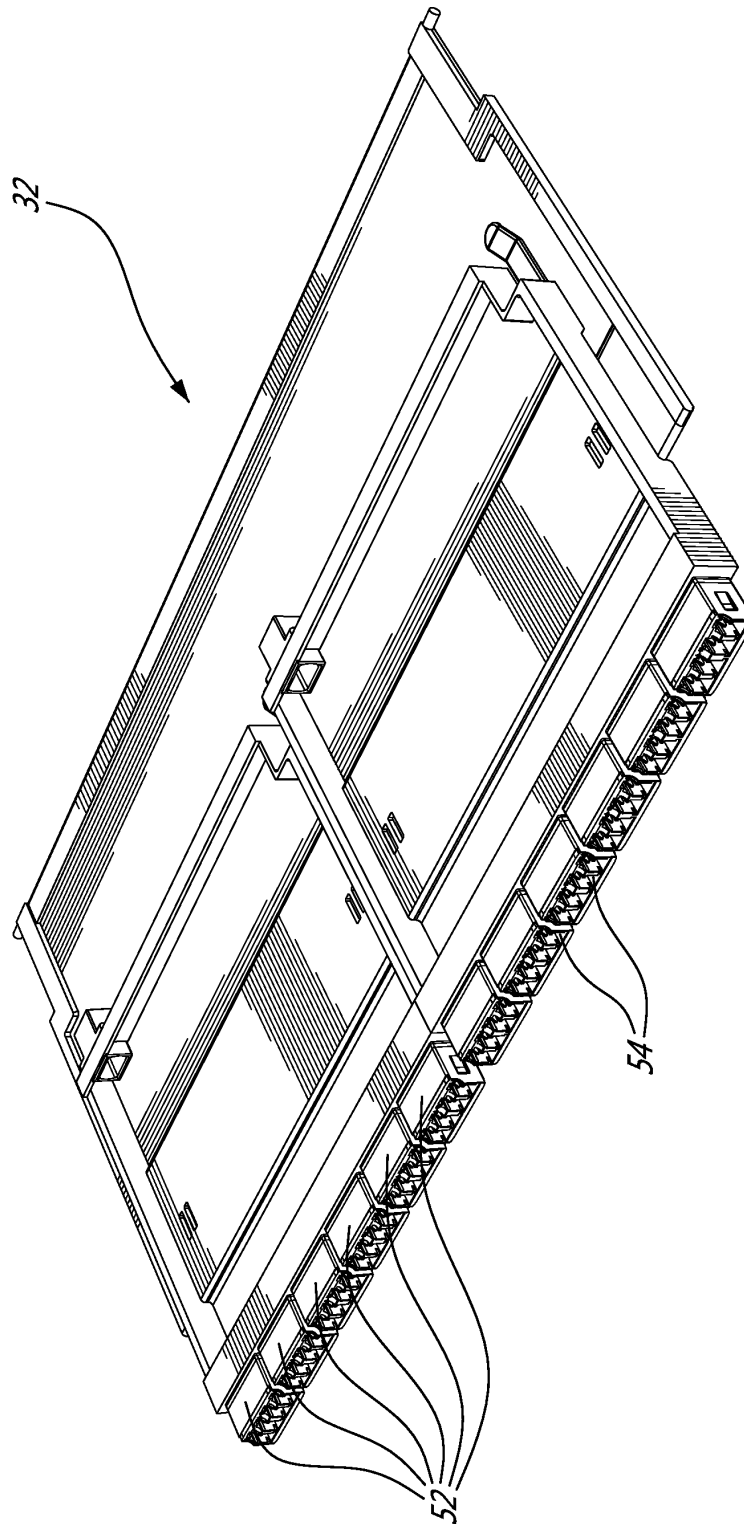
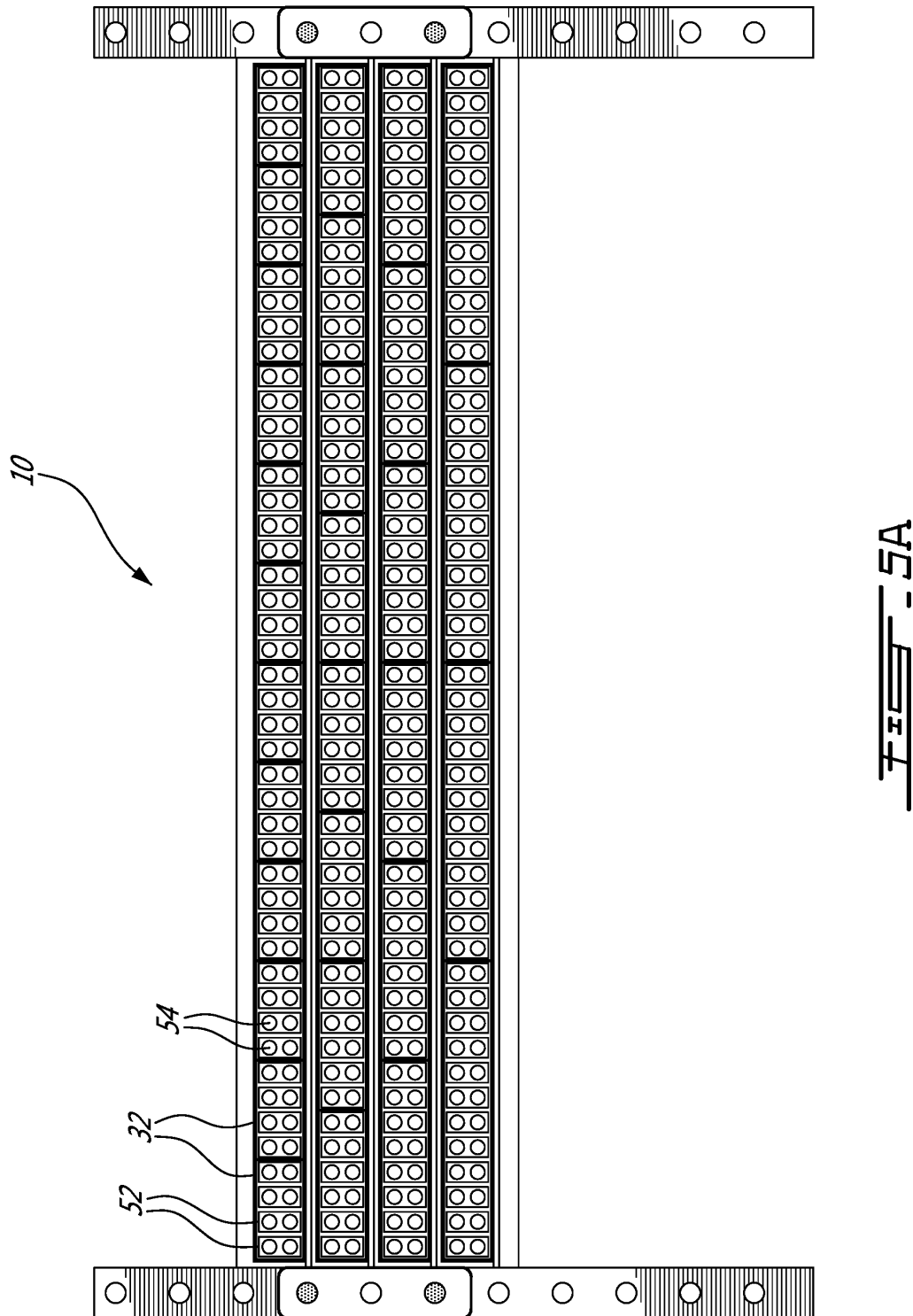
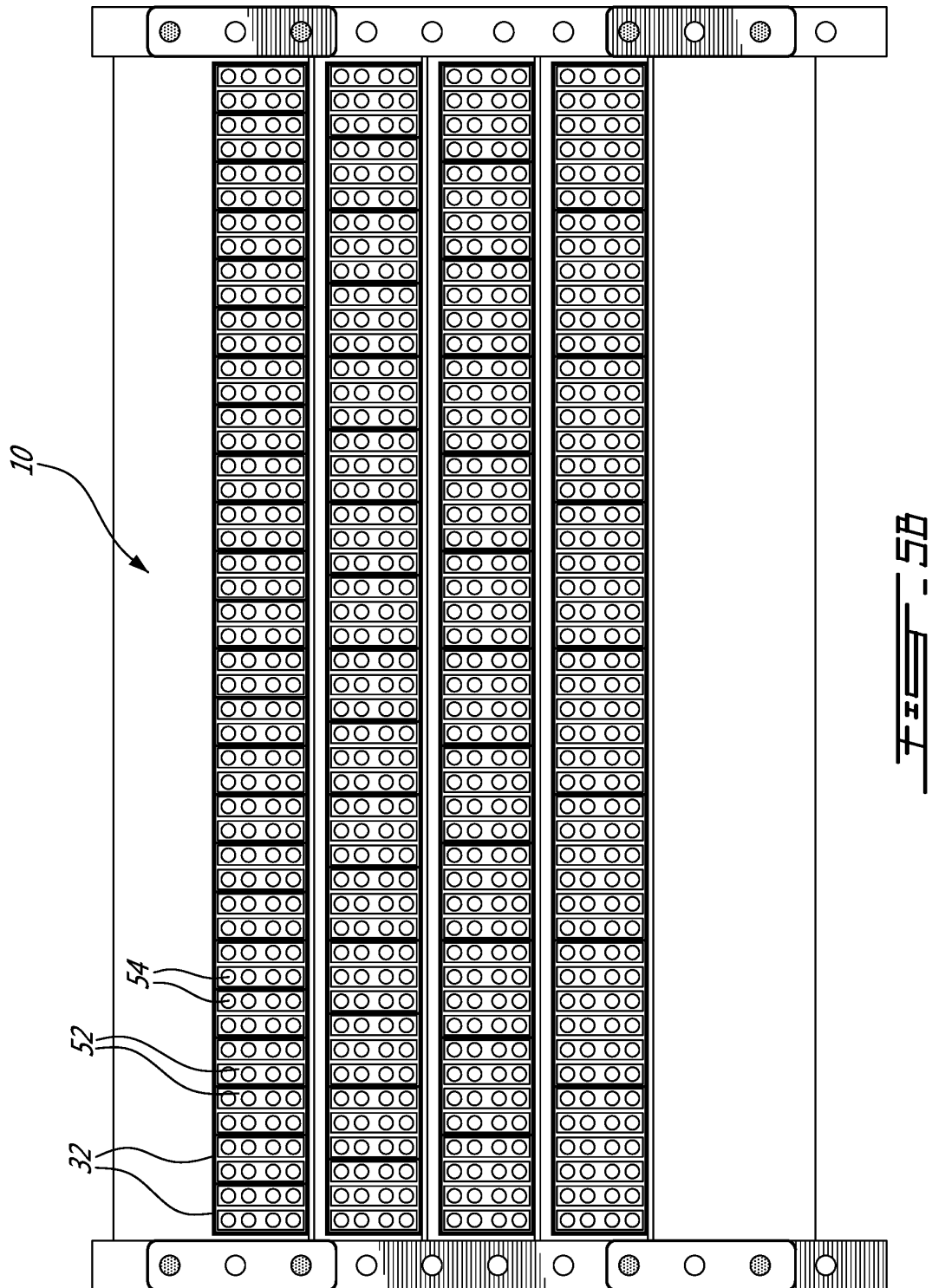


FIG. 40





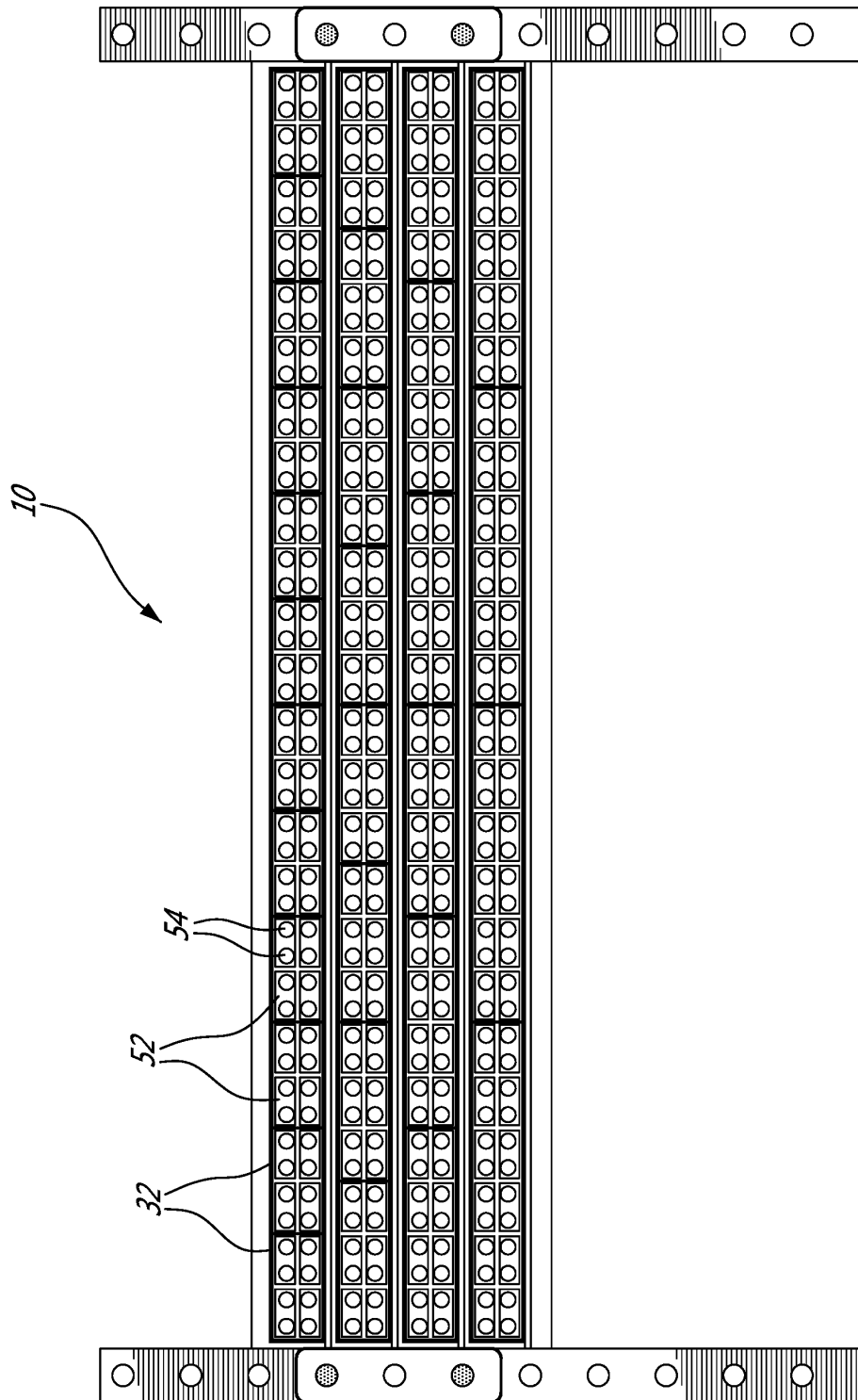


FIG. 10

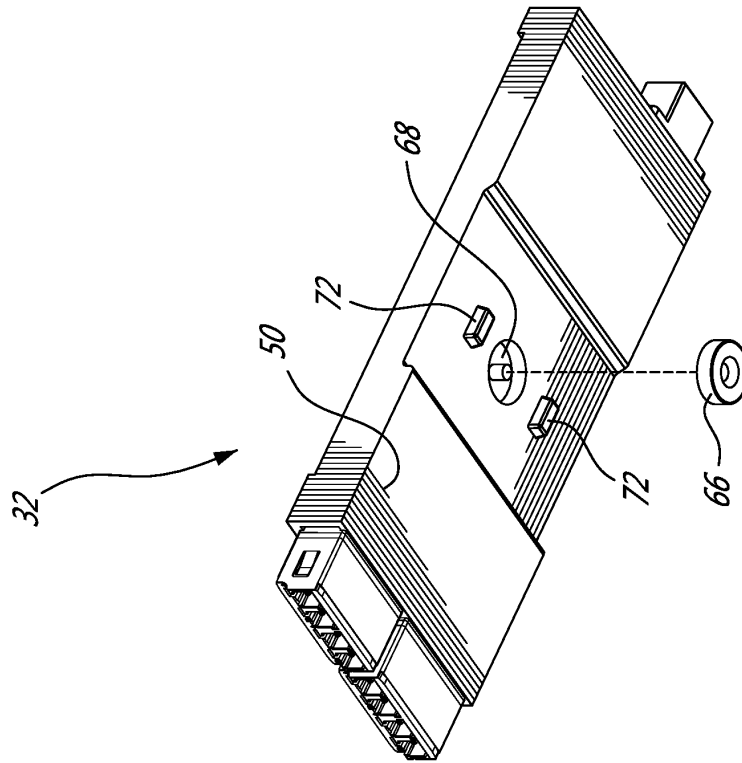


FIG. 6B

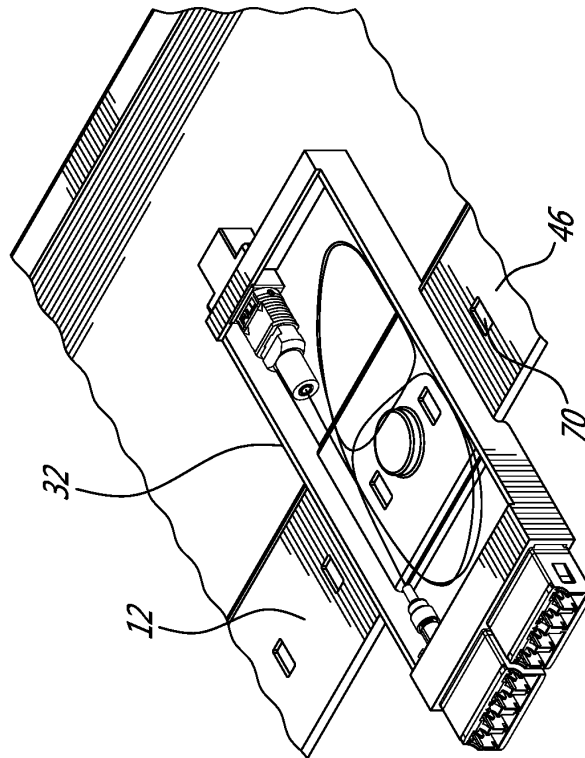


FIG. 6A

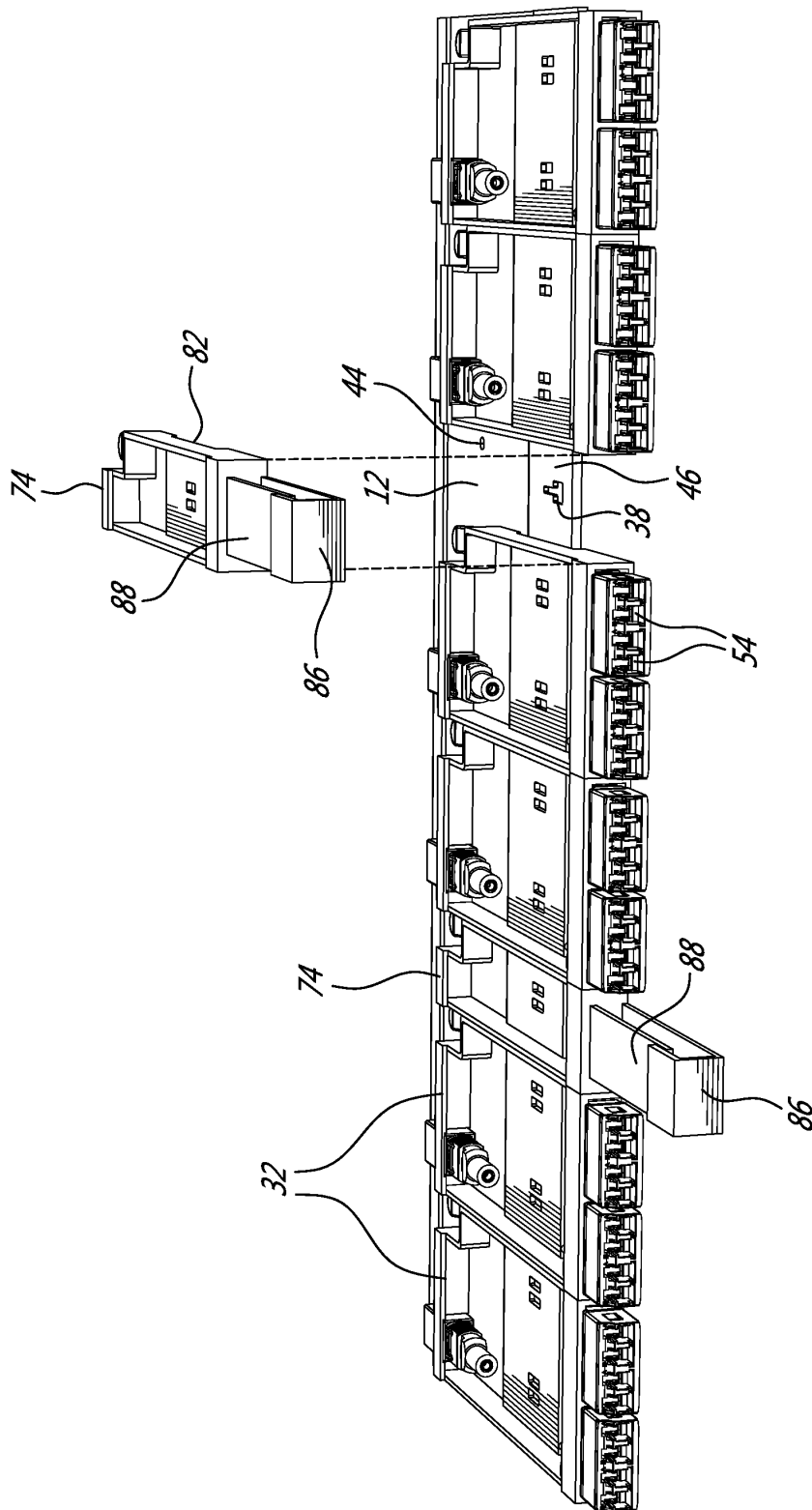


FIG. 7A

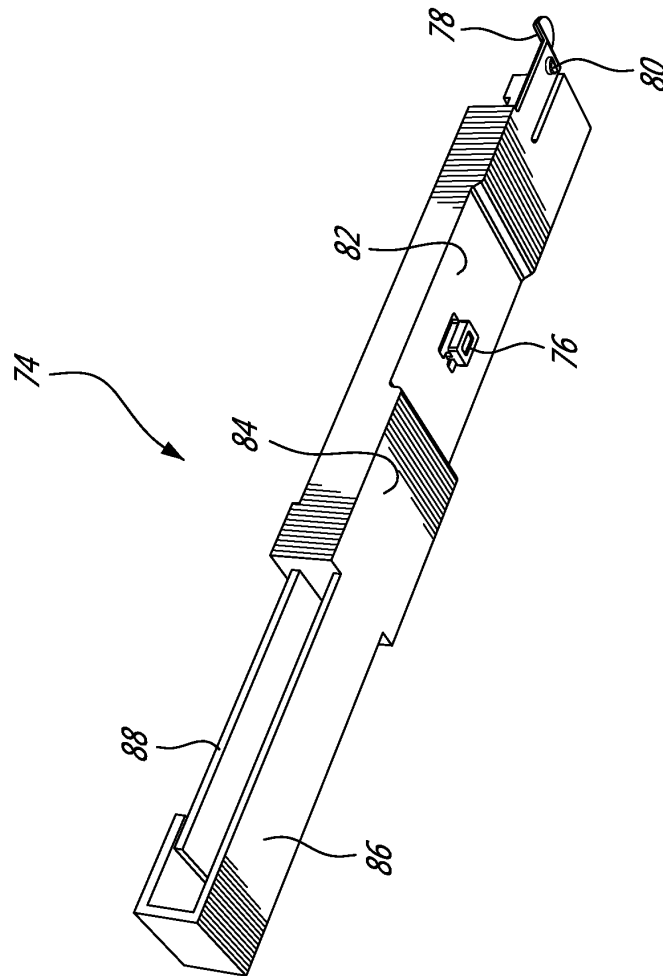
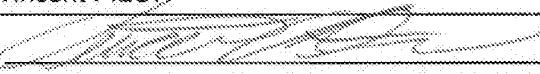


FIG. 7B

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76)**

Title of Invention	MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD
As the below named inventor, I hereby declare that:	
This declaration is directed to: ☐ The attached application, or	
☒ United States application or PCT international application number <u>16/143,831</u>	
filed on <u>September 27, 2018</u>	
The above-identified application was made or authorized to be made by me.	
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.	
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.	
WARNING:	
Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.	
LEGAL NAME OF INVENTOR	
Inventor: <u>Vincent PILON</u>	Date (Optional): <u>10/01/2018</u>
Signature: 	
Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.	

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

☒ Practitioners associated with Customer Number:

25545

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number

Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned, according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

☒ The address associated with Customer Number:

25545

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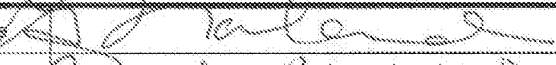
☐ Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

Assignee Name and Address: BELDEN CANADA INC.
2310 ALFRED-NOBEL
SAINT-LAURENT, QUEBEC CANADA H4S 2B4

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of The practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature 	Date <u>12/16/2016</u>
Name <u>GAYLAINE BRANCHAUD</u>	Telephone <u>514 822-7059</u>
Title <u>DIRECTOR</u>	

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: BELDEN CANADA INC.

Application No./Patent No.: 16/143,831

Filed/Issue Date: SEPTEMBER 27, 2018

Titled: MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD

BELDEN CANADA INC., a CORPORATION

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

☐ The extent (by percentage) of its ownership interest is ____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/HUGH MANSFIELD/

Signature

HUGH MANSFIELD

Printed or Typed Name

OCTOBER 4, 2018

Date

55757

Title or Registration Number

[Page 2 of 2]

ASSIGNMENT OF INVENTION

UNIVERSAL

WHEREAS, I/We, 1) Vincent PILON whose full address is 1) 850, 40e avenue, Lachine, Québec H8T 2G6, Canada (hereinafter referred to as the Assignors); have invented MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD described in U.S. Patent Application No. 16/143,831 filed on September 27, 2018 which claims priority on U.S. Patent Application No. 62/567,339 filed on October 3, 2017. I/We hereby authorize and request my/our patent agent to insert missing information above and information regarding any additional application covering the same invention when known here in parentheses (Country Canada, Application number 3,019,081, filed September 27, 2018, Country _____, Application number _____, filed _____);

and:

WHEREAS, BELDEN CANADA INC., whose full post office address is 2310 Alfred Nobel, Saint-Laurent, Québec H4S 2B4, Canada (hereinafter referred to as the Assignee), is desirous of acquiring my/our entire right, title and interest in and to said invention or inventions and in and to any and all patents to be obtained therefor;

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other valuable consideration, the receipt of which is hereby acknowledged, I/We have and by these present do hereby sell, assign and transfer unto said Assignee, its successors and assigns, my/our entire right, title and interest in and to said invention or inventions, as described in the aforesaid application, in any form or embodiment thereof, and in and to the aforesaid application; and in and to any applications based thereon filed in any foreign country, including the right to file said foreign applications under the provisions of the Patent Cooperation Treaty and under the Paris Convention; also my/our entire right, title and interest in and to any and all patents, reissues or extensions thereof to be obtained in this or any foreign country upon said invention or inventions, and any divisional, continuation, continuation-in-part, substitute application(s) or supplementary disclosure(s) which may be

filed upon said invention or inventions, in any country; and I/We hereby authorize and request the issuing authority to issue any and all patents on said application or applications to said Assignee.

I/We further agree without any payment by said Assignee other than expenses incurred by the undersigned, to communicate to said Assignee, its representatives or agents, any facts useful as evidence for interference purposes or for other proceedings relating to intellectual property encompassing the invention, whenever requested; testify in any interference, litigation or other proceedings, whenever requested; and execute and deliver, on request, all lawful papers required to make any of the foregoing provisions effective, and likewise make these provisions binding upon my/our heirs, legal representatives, administrators and assigns.

Les soussignés désirent que la présente cession soit en anglais. The undersigned request that the present assignment be in English.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand(s) and seal.

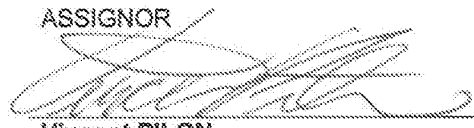
WITNESS

DATE

ASSIGNOR


Signature of Witness

10-01-2018
MM/DD/YYYY


Vincent PILON

WE MILETTE
Name of Witness

WITNESS DATE
Francis Beauregard 10/01/2018
 Signature of Witness MM/DD/YYYY

FRANCOIS BEAUREGARD
 Name of Witness

ASSIGNEE

 Signature of authorized representative
 of BELDEN CANADA INC.

WIL MILETTE, INC.
 Name of authorized representative of
 BELDEN CANADA INC.

Dir. R&D Networking Community
 Title of authorized representative of
 BELDEN CANADA INC.

The Assignment is executed *nunc pro tunc* as of October 3, 2017.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	
	Filing Date	
	First Named Inventor	Vincent PILON
	Art Unit	
	Examiner Name	
	Attorney Docket Number	G13569-00485-HM

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	4792203	A	1988-12-20	Nelson et al.	
	2	7331722	B2	2008-02-19	Tan	
	3	7509015	B2	2009-05-24	Murano	
	4	8913866	B2	2014-12-16	Cote et al.	
	5	9008485	B2	2015-04-14	Ramirez et al.	
	6	9075216	B2	2015-07-07	Cote et al.	
	7	10215944	B2	2019-02-26	Sedor et al.	
	8	10281672	B1	2019-05-07	Mullsteff	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Vincent PILON	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	G13569-00485-HM	

	9	10514518	B2	2019-12-24	Livingston et al.	
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If you wish to add additional U.S. Patent citation information please click the Add button.

Add

U.S.PATENT APPLICATION PUBLICATIONS

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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20070131628	A1	2007-06-14	Mimlitch	
	2	20090290842	A1	2009-11-26	Bran de Leon et al.	
	3	20160033732	A1	2016-02-04	Giraud et al.	
	4	20160062050	A1	2016-03-03	Giraud et al.	
	5	20190004268	A1	2019-01-03	Vogel	
	6	20190101717	A1	2019-04-04	Pilon	
	7	20190107682	A1	2019-04-11	Aramayo et al.	
	8	20190162924	A1	2019-05-30	Fontaine et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Vincent PILON	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	G13569-00485-HM	

	9	20190187394	A1	2019-06-20	Fontaine et al.	
	10	20200131730	A1	2020-04-30	Spiro	

If you wish to add additional U.S. Published Application citation information please click the Add button.

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FOREIGN PATENT DOCUMENTS

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							

If you wish to add additional Foreign Patent Document citation information please click the Add button

Add

NON-PATENT LITERATURE DOCUMENTS

Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1		

If you wish to add additional non-patent literature document citation information please click the Add button

Add

EXAMINER SIGNATURE

Examiner Signature

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Vincent PILON	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	G13569-00485-HM	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Hugh Mansfield/	Date (YYYY-MM-DD)	2020-09-02
Name/Print	Hugh Mansfield	Registration Number	55757

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:



Practitioners associated with Customer Number:

25545

OR



Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number

Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:



The address associated with Customer Number:

25545

OR

☐	Firm or Individual Name			
	Address			
	City	State	Zip	
	Country			
	Telephone	Email		

Assignee Name and Address: **Belden Canada ULC**
2310 Alfred-Nobel
Saint-Laurent, Quebec Canada H4S 2B4

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of The practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	August 31, 2020
Name	Brian E. Anderson	Telephone	314-854-8035
Title	Secretary		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

CORRECTED APPLICATION DATA SHEET

PTO/AIA/14 (11-15)

Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	G13569-00485-HM
		Application Number	17/010,113
Title of invention	~~MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD~~ MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

- ☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove				
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	VINCENT		PILON	
Residence Information (Select One) ☐ US Residency ☒ Non US Residency ☐ Active US Military Service				
City	LACHINE	Country of Residence ¹	CA	
Mailing Address of Inventor:				
Address 1	850 40e AVENUE			
Address 2				
City	LACHINE	State/Province	QC	
Postal Code	H8T 2G6	Country ¹	CA	
All Inventors Must Be Listed - Additional Inventor information blocks may be generated within this form by selecting the Add button. Add				

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence information of this application.			
Customer Number	25545		
Email Address	hmansfield@lavery.ca	Add Email	Remove Email
Email Address	uspatients@lavery.ca	Add Email	Remove Email

Application Information:

Title of the Invention	~~MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD~~ MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD		
Attorney Docket Number	G13569-00485-HM	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	13	Suggested Figure for Publication (if any)	

EFS Web 2.2.12

CORRECTED APPLICATION DATA SHEET

PTO/AIA/14 (11-15)

Approved for use through 04/30/2017. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	G13569-00485-HM
	Application Number	17/010,113
Title of Invention	MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	25545		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	16143831	2018-09-27

CORRECTED APPLICATION DATA SHEET

PTO/AIA/14 (11-15)

Approved for use through 04/30/2017. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	G13569-00485-HM
		Application Number	17/010,113
Title of Invention	~~MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD~~ MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD		
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
16143831	Claims benefit of provisional	62567339	2017-10-03
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) ¹ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove			
Application Number	Country ¹	Filing Date (YYYY-MM-DD)	Access Code ¹ (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	G13569-00485-HM
	Application Number	17/010,113
Title of Invention	~~MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD~~ MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

CORRECTED APPLICATION DATA SHEET

PTO/AIA/14 (11-15)

Approved for use through 04/30/2017. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	G13569-00485-HM
	Application Number	17/010,113
Title of Invention	~~MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD~~ MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

[Clear](#)

- ☐ Assignee ☐ Legal Representative under 35 U.S.C. 117 ☐ Joint Inventor
- ☒ Person to whom the inventor is obligated to assign. ☐ Person who shows sufficient proprietary interest

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name BELDEN CANADA ULC

Mailing Address Information For Applicant:

Address 1 2310 ALFRED-NOBEL

Address 2

City SAINT-LAURENT

State/Province

QC

Country CA

Postal Code

H4S 2B4

Phone Number

Fax Number

Email Address

Additional Applicant Data may be generated within this form by selecting the Add button.

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

CORRECTED APPLICATION DATA SHEET

PTO/AIA/14 (11-15)

Approved for use through 04/30/2017. OMB 0851-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

~~Application Data Sheet 37 CFR 1.78~~		Attorney Docket Number	G13569-00485-HM
		Application Number	17/010,113
Title of Invention	MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD		

Assignee 1				
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
If the Assignee or Non-Applicant Assignee is an Organization check here. ☐				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country i		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).				
This Application Data Sheet <u>must</u> be signed by a patent practitioner if one or more of the applicants is a juristic entity (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, <u>all</u> joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of <u>all</u> joint inventor-applicants.				
See 37 CFR 1.4(d) for the manner of making signatures and certifications.				
Signature	~~/HUGH MANSFIELD/~~ /HUGH MANSFIELD/		Date (YYYY-MM-DD)	~~2020-09-02~~ 2020-09-08
First Name	~~HUGH~~ Hugh	Last Name	~~MANSFIELD~~ Mansfield	Registration Number ~~55757~~ 55757
Additional Signature may be generated within this form by selecting the Add button.				

CORRECTED APPLICATION DATA SHEET

PTO/AIA/14 (11-15)

Approved for use through 04/30/2017. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	G13569-00485-HM
	Application Number	17/010,113
Title of Invention	~~MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD~~ MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: BELDEN CANADA ULC
Application No./Patent No.: 17/010,113 Filed/Issue Date: September 2, 2020
Titled: MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD
BELDEN CANADA ULC, a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is ____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Vincent PILON To: Belden Canada Inc.

The document was recorded in the United States Patent and Trademark Office at
Reel 047254, Frame 0973, or for which a copy thereof is attached.

2. From: Belden Canada Inc. To: Belden Canada ULC

The document was recorded in the United States Patent and Trademark Office at
Reel 053639, Frame 0483, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

- ☒ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.
- [NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Hugh Mansfield/

Signature

Hugh Mansfield

Printed or Typed Name

September 8, 2020

Date

55757

Title or Registration Number

[Page 2 of 2]

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	40463905
Application Number:	17010113
International Application Number:	
Confirmation Number:	1019
Title of Invention:	MODULAR FIBRE OPTIC CASSETTE, SYSTEM AND METHOD
First Named Inventor/Applicant Name:	VINCENT PILON
Customer Number:	25545
Filer:	Hugh Mansfield/Regeline Jean Francois
Filer Authorized By:	Hugh Mansfield
Attorney Docket Number:	G13569-00485-HM
Receipt Date:	08-SEP-2020
Filing Date:	
Time Stamp:	16:06:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment		no			
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	POA-BELDEN_ULC.pdf	280071	no	1
			b118181658d71bd2d34ecfdcc388159f6fde873b		
Warnings:					

Information:					
2	Application Data Sheet	2501-USPTO-SADS.pdf	2840148	no	8
			99af2f8f3df50a41309a4a511152b8078cf8e622		
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
3	Assignee showing of ownership per 37 CFR 3.73	2501-USPTO-Statement_Under_37_CFR_3-73.pdf	128518	no	3
			b19098d15e10889a3c763d600e741d85e2a7bcbdb		
Warnings:					
Information:					
Total Files Size (in bytes):			3248737		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 17/010,113			
APPLICATION AS FILED - PART I									
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY			
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)		
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	300		
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	660		
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760		
TOTAL CLAIMS (37 CFR 1.16(i))	13	minus 20 = *				x 100 =	0.00		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2	minus 3 = *				x 460 =	0.00		
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00		
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00		
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1720		
APPLICATION AS AMENDED - PART II									
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total (37 CFR 1.16(i))	*	Minus **	=			x	=	
	Independent (37 CFR 1.16(h))	*	Minus ***	=			x	=	
	Application Size Fee (37 CFR 1.16(s))								
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
	TOTAL ADD'L FEE						TOTAL ADD'L FEE		
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total (37 CFR 1.16(i))	*	Minus **	=			x	=	
	Independent (37 CFR 1.16(h))	*	Minus ***	=			x	=	
	Application Size Fee (37 CFR 1.16(s))								
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
	TOTAL ADD'L FEE						TOTAL ADD'L FEE		
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.									



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
17/010,113	09/02/2020	2883	1720	G13569-00485-HM	13	2

CONFIRMATION NO. 1019
FILING RECEIPT

25545
Lavery, De Billy, LLP
1 Place Ville Marie, Suite 4000
Montreal, QC H3B 4M4
CANADA



CC000000119832038

Date Mailed: 09/15/2020

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

VINCENT PILON, LACHINE, CANADA;

Applicant(s)

BELDEN CANADA ULC, SAINT-LAURENT, CANADA

Power of Attorney: The patent practitioners associated with Customer Number 25545

Domestic Priority data as claimed by applicant

This application is a CON of 16/143,831 09/27/2018
which claims benefit of 62/567,339 10/03/2017

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 09/11/2020

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/010,113**

Projected Publication Date: 12/24/2020

Non-Publication Request: No

Early Publication Request: No
Title

MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD

Preliminary Class

385

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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	Filing Date	2020-09-02
	First Named Inventor	Vincent PILON
	Art Unit	
	Examiner Name	
	Attorney Docket Number	G13569-00485-HM

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	4792203	A	1988-12-20	Nelson et al.	
	2	7331722	B2	2008-02-19	Tan	
	3	7509015	B2	2009-05-24	Murano	
	4	8913866	B2	2014-12-16	Cote et al.	
	5	9008485	B2	2015-04-14	Ramirez et al.	
	6	9075216	B2	2015-07-07	Cote et al.	
	7	10215944	B2	2019-02-26	Sedor et al.	
	8	10281672	B1	2019-05-07	Mullsteff	

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	Art Unit			
	Examiner Name			
	Attorney Docket Number		G13569-00485-HM	

	9	10514518	B2	2019-12-24	Livingston et al.	
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	3	20160033732	A1	2016-02-04	Giraud et al.	
	4	20160062050	A1	2016-03-03	Giraud et al.	
	5	20190004268	A1	2019-01-03	Vogel	
	6	20190101717	A1	2019-04-04	Pilon	
	7	20190107682	A1	2019-04-11	Aramayo et al.	
	8	20190162924	A1	2019-05-30	Fontaine et al.	

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	Art Unit		
	Examiner Name		
	Attorney Docket Number		G13569-00485-HM

	9	20190187394	A1	2019-06-20	Fontaine et al.	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	17010113
	Filing Date	2020-09-02
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	Art Unit	
	Examiner Name	
	Attorney Docket Number	G13569-00485-HM

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Hugh Mansfield/	Date (YYYY-MM-DD)	2020-09-16
Name/Print	Hugh Mansfield	Registration Number	55757

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Electronic Acknowledgement Receipt	
EFS ID:	40565566
Application Number:	17010113
International Application Number:	
Confirmation Number:	1019
Title of Invention:	MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD
First Named Inventor/Applicant Name:	VINCENT PILON
Customer Number:	25545
Filer:	Hugh Mansfield
Filer Authorized By:	
Attorney Docket Number:	G13569-00485-HM
Receipt Date:	16-SEP-2020
Filing Date:	02-SEP-2020
Time Stamp:	16:43:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

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File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	2501-USPTO-IDS.pdf	1057935 f1b17f18f253d4bc93e42ab02addf806804c ee53	no	5
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/010,113	09/02/2020	VINCENT PILON	G13569-00485-HM

CONFIRMATION NO. 1019

PUBLICATION NOTICE

25545

Lavery, De Billy, LLP
1 Place Ville Marie, Suite 4000
Montreal, QC H3B 4M4
CANADA



OC000000122262572

Title:MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD

Publication No.US-2020-0400908-A1

Publication Date:12/24/2020

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/010,113	09/02/2020	VINCENT PILON	G13569-00485-HM	1019

25545	7590	09/10/2021
Lavery, De Billy, LLP		
1 Place Ville Marie, Suite 4000		
Montreal, QUEBEC H3B 4M4		
CANADA		

EXAMINER
PEACE, RHONDA S

ART UNIT	PAPER NUMBER
2874	

NOTIFICATION DATE	DELIVERY MODE
09/10/2021	ELECTRONIC

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

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uspto@lavery.ca

DETAILED ACTION

Notice of Pre-AIA or AIA Status

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

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 9/2/20 and 9/16/20 were filed in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Rejections - 35 USC § 102

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

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)(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.

Claim(s) 1-5 and 8-13 is/are rejected under 35 U.S.C. 102(a)(2) as being anticipated by Sedor et al (US 10,215,944 B2).

Re. Claim 1, Sedor et al discloses a modular fiber optic cassette system 50 (Fig 1A; col. 4 lines 14-16), the system comprising:

a case 100 comprising a top wall 102 and a bottom wall 112 and two opposed side walls 104/106, each of said sidewalls 104/106 attached between respective side edges of said top and bottom wall 102/112, said walls together defining a tray receiving space there between and a forward edge of each said wall together defining an opening to said tray receiving space (Figs 1A and 2A-2C; col. 4 lines 36-51);

at least one tray 120 slideably received within said tray receiving space for movement between a stored position wherein said tray 120 is completely inside said tray receiving space and an accessible position wherein a front end of said tray 120 is in front of said opening and outside of said tray receiving space (Figs 1A, 1B, and 5; col. 4 lines 62-67; col. 5 lines 1-22);

a set of fiber optic cassettes 30/40, a selected plurality of the cassettes arrangeable side by side along said tray front end wherein each of said cassettes comprises a plurality of optic plug receiving receptacles arranged side by side in a row along a front thereof, a first 40 of said set of cassettes 30/40 comprising a first cassette width of one of one, two, three, four and six standard width units (i.e. first cassette 40 has a width of two standard width units; Figs 9-10) and a second of said cassettes 30 comprising a second cassette width different from said first cassette width and one of one, two, three, four and six standard width units (i.e. second cassette 30 of Figs 7-8 has a width of three standard width units) (Figs 7-10; col. 4 lines 19-35; col. 5 lines 39-47); and

a fastener 180 for removeably securing each of said cassettes 30/40 to said tray 120 (Figs 6B and 7-10; col. 5 lines 23-47),

wherein when arranged on the tray 120, each of said fiber optic cassettes 30/40 is directly adjacent at least one other fiber optic cassette 30/40 (Figs 7-10).

It is of note, for purposes of Sedor et al, one standardized width unit accommodates four receptacles, as in the current invention.

Also, “directly adjacent” is not specifically defined by Applicant’s disclosure, and therefore interpreted according to the broadest reasonable interpretation of the phrase. Broadly, the term “adjacent” in reference to objects requires the objects be in the general vicinity of each other. “Directly adjacent” is interpreted as requiring a smaller distance between objects (as opposed to “adjacent”), but does not preclude intervening structure between the objects, and instead only requires the objects are placed closely together. The cassettes of Sedor et al, while having rails placed therebetween, are nonetheless situated very close to each other and therefore meet the claim limitation of being “directly adjacent.”

Re. Claim 2, Sedor et al discloses said tray 120 has a width dimensioned to receive at least twelve standard width units side by side (Figs 7-10; col. 5 lines 35-51).

Re. Claim 3, Sedor et al discloses each of said cassettes 30/40 comprises a multi-fiber connector receiving receptacle arranged on a rear thereof and a plurality of optic fibers, one of said optic fibers interconnecting a respective one of said optic plug receiving receptacles with said multi fiber connector receiving receptacle (Figs 7-10; col. 4 lines 23-31).

Re. Claim 4, Sedor et al discloses each of said cassettes 30/40 comprises four fiber optic plug receiving receptacles arranged side by side in a row along a front thereof for each standard width unit (Figs 7-10; col. 4 lines 19-35; col. 5 lines 39-47).

Re. Claim 5, Sedor et al discloses said system 50 is for mounting in a rack 2/4 and further comprising a pair of mounting brackets 108, one of said brackets 108 attached to each of said sidewalls 104/106 on either side of an outside of said case 100, said mounting brackets 108 for securing said case 100 to the rack 2/4 (Fig 1A; col. 4 lines 51-54).

Re. Claim 8, Sedor et al discloses a method for organizing a tray comprising a front edge in a fiber optic interconnect system, the method comprising:

defining a standard width unit wherein a width of the front edge is substantially evenly divisible by said standard width unit (col. 1 lines 24-32);

selecting a plurality of cassettes for installation on the tray from a set of cassettes 30/40 having a plurality of different widths (i.e. cassette 40 of Figs 9-10 has a width of two standard width units; second cassette 30 of Figs 7-8 has a width of three standard width units), wherein each of said different widths is evenly divisible by said standard width unit (Figs 7-10; col. 4 lines 19-35; col. 5 lines 39-47); and

releasably securing said selected cassettes along the front edge of the tray 120 (Figs 6B and 7-10; col. 5 lines 23-47);

wherein when arranged on the tray 120, each of said fiber optic cassettes 30/40 is directly adjacent at least one other selected fiber optic cassette 30/40 (Figs 7-10).

Re. Claim 9, Sedor et al discloses said set of cassettes 30/40 comprises cassettes comprising widths of one, two, three, four and six standard width units (i.e.

cassette 40 of Figs 9-10 has a width of two standard width units; second cassette 30 of Figs 7-8 has a width of three standard width units) (Figs 7-10; col. 4 lines 19-35; col. 5 lines 39-47).

Re. Claim 10, Sedor et al discloses said selected cassettes all comprise the same width, for example Figures 7 and 8 show the tray filled with cassettes 30 while Figures 9-10 show the tray filled with cassettes 40.

Re. Claim 11, Sedor et al discloses said selected cassettes comprise a first cassette having a first width and a second cassette having a second width different from said first width, for example when a tray 120 is rearranged to accommodate cassettes having a different size from those previously installed on the tray (col. 5 lines 35-47).

Re. Claim 12, Sedor et al discloses the width of the front edge is substantially evenly divisible by a maximum of twelve (12) of said standard width units (Figs 7-10; col. 5 lines 35-51).

Re. Claim 13, Sedor et al discloses said selected cassettes further comprise a third cassette 20 comprising a third width different from said first width and said second width (Figs 11-12; col. 4 lines 19-31; col. 5 lines 48-51).

Claim Rejections - 35 USC § 103

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

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.

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.

Claim 6 is/are rejected under 35 U.S.C. 103 as being unpatentable over Sedor et al (US 10,215,944 B2) and Nelson et al (US 4,792,203).

Re. Claim 6, Sedor et al discloses the modular fiber optic cassette system as discussed above. Additionally, Sedor et al discloses a modular fiber optic cassette 30/40 for releasably securing to a tray 120, comprising:

an elongate rectangular optic fiber receiving housing (Figs 7-10; col. 4 lines 19-35);

a plurality of optic plug receiving receptacles arranged in a row along a front of said housing (Figs 7-10; col. 4 lines 23-26);

a multi fiber connector receiving receptacle on a rear thereof (Figs 7-10; col. 4 lines 23-26);

a plurality of optic fibers interconnecting a respective one of said optic plug receiving receptacles with said multi fiber connector receiving receptacle (col. 1 lines 21-23; col. 4 lines 23-26); and

a fastener 180 secured to an underside of said housing (i.e. an outer bottom edge of the housing slides and is retained on a portion of the fastener 180 (Figs 6B and 26A-26B; col. 7 lines 1-29).

In Sedor et al, the fastener 180 is a rail that is removeably coupled to the tray 120, specifically protrusions on the rail mate with holes on the tray (Figs 5, 6B, 7-10, and 13A-13C; col. 5 lines 23-67; col. 6 lines 1-4). Sedor et al does not disclose alternative coupling means, such as magnetic coupling, between the fastener 180 and the tray 120. That is to say, Sedor et al does not disclose the tray being fabricated from a *ferrous metal* and the fastener comprising a *magnet*.

The use of a magnetic coupling arrangement for attaching a magnetic rail to a metallic tray surface is well known in the optical arts, as seen by Nelson et al. Nelson et al discloses a magnetic rail 60/62 for coupling to a ferrous metal tray 24 (Fig 6; col. 5 lines 24-35).

It would have been obvious to one of ordinary skill in the art to utilize a metal tray and a fastener comprising a magnet in the system of Sedor et al, since the same is a well-known arrangement of the art as evidences by Nelson et al, and is capable of achieving the attachment/detachment/reattachment nature of the fastener as desired by Sedor et al.

The claim would have been obvious because the substitution of one known element for another (i.e. the substitution of magnetized fastening means for protrusion/aperture fastener means) would have yielded predictable results to one of ordinary skill in the art at the time of the invention. *KSR International Co. v. Teleflex Inc.*, 550 USPQ2d 1385 (2007).

Claim 7 is/are rejected under 35 U.S.C. 103 as being unpatentable over Sedor et al (US 10,215,944 B2) and Giraud et al (US 2016/0062050 A1).

Re. Claim 7, Sedor et al discloses the modular fiber optic cassette system of as discussed above.

However, Sedor et al does not disclose the system as further comprising *at least one elongate cable management bracket comprising a cable management loop and a fastener for removeably securing said at least one bracket to said tray, said bracket having a bracket width of one of said standard width units and further wherein when installed on said tray adjacent an installed one of said cassettes, said cable management loop is positioned in front of and to a side of said plurality of optic plug receiving receptacles of said installed cassette.*

Giraud et al discloses a modular fiber optic cassette system comprising a case 300 (Fig 3A; [0060]) for retaining at least one slideable tray 100 (Figs 2A and 2B; [0056]-[0057]), the tray 100 comprising a plurality of cassettes 10 (Figs 1A, 2A-2B, and [0053]) and at least one elongate cable management bracket 400 (Figs 6-7; [0066]) attached thereto, the cable management bracket 400 comprising a cable loop and a fastener 422 for removeably securing said at least one bracket 400 to said tray 100 (Figs 6-7; [0067]), said bracket 400 having a bracket width of one of said standard width

units ([0066]) and further wherein when installed on said tray adjacent an installed one of said cassettes, said cable loop is positioned in front of and to a side of said plurality of optic plug receiving receptacles of said installed cassette (Fig 7).

It would have been obvious to one of ordinary skill at the time the invention was effectively filed to include the cable management bracket of Giraud et al in the system of Sedor et al, since Giraud et al discloses the cable management bracket provides the network operator flexibility in the optical network to make moves, adds, and changes to transmission protocol as desired while maintaining a neat and orderly cable deployment and routing for the data center (Giraud et al: [0065]).

While Giraud et al discloses a cable loop is formed at the forward end of the bracket 400 (i.e. cable looped from adapter 418 through cut-out 411; Fig 6-7; [0066]-[0067]), Giraud et al fails to disclose *a cable management loop* to support said cable loop.

The use of management loops to support a looped length of optical cable is well known in the art, and commonly used to impact structural stability of the cable loop, thereby minimizing damage to the cable. The claimed cable management loop would have been obvious to one of ordinary skill for the purpose of minimizing damage to the optical cable of Giraud et al. “A person of ordinary skill is also a person of ordinary creativity, not an automaton” – “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of

innovation but of ordinary skill and common sense.” *KSR International Co. v. Teleflex Inc.*, 550 USPQ2d 1385 (2007).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the attached PTO-892, which lists modular fiber optic cassette trays known in the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. PEACE whose telephone number is (571)272-8580. The examiner can normally be reached on 9-5 pm.

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, Uyen-Chau Le can be reached on (571) 272-2397. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/RHONDA S PEACE/
Primary Examiner, Art Unit 2874
9/7/21

<i>Notice of References Cited</i>	Application/Control No. 17/010,113		Applicant(s)/Patent Under Reexamination PILON, VINCENT	
	Examiner R. PEACE		Art Unit 2874	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20160062068-A1	03-2016	Giraud; William Julius McPhil	G02B6/3885	385/135
*	B	US-20180003912-A1	01-2018	Sedor; Thomas M.	G02B6/4452	1/1
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<i>Search Notes</i> 	Application/Control No. 17/010,113	Applicant(s)/Patent Under Reexamination PILON, VINCENT
	Examiner R. PEACE	Art Unit 2874

CPC - Searched*		
Symbol	Date	Examiner

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US Classification - Searched*			
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Search Notes		
Search Notes	Date	Examiner
inventor search	09/07/2021	RSP
global dossier search	09/07/2021	RSP
see attached SEARCH history notes	09/07/2021	RSP

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/RHONDA S PEACE/ Primary Examiner, Art Unit 2874	
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Doc code: IDS

PTO/SB/08a (02-18)

Doc description: Information Disclosure Statement (IDS) Filed

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	1	4792203	A	1988-12-20	Nelson et al.	
	2	7331722	B2	2008-02-19	Tan	
	3	7509015	B2	2009-05-24	Murano	
	4	8913866	B2	2014-12-16	Cote et al.	
	5	9008485	B2	2015-04-14	Ramirez et al.	
	6	9075216	B2	2015-07-07	Cote et al.	
	7	10215944	B2	2019-02-26	Sedor et al.	
	8	10281672	B1	2019-05-07	Mullsteff	

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Application Number		
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First Named Inventor	Vincent PILON	
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Attorney Docket Number	G13569-00485-HM	

	9	10514518	B2	2019-12-24	Livingston et al.	
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	1	20070131628	A1	2007-06-14	Mimlitch	
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	3	20160033732	A1	2016-02-04	Giraud et al.	
	4	20160062050	A1	2016-03-03	Giraud et al.	
	5	20190004268	A1	2019-01-03	Vogel	
	6	20190101717	A1	2019-04-04	Pilon	
	7	20190107682	A1	2019-04-11	Aramayo et al.	
	8	20190162924	A1	2019-05-30	Fontaine et al.	

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First Named Inventor	Vincent PILON	
Art Unit		
Examiner Name		
Attorney Docket Number	G13569-00485-HM	

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Signature	/Hugh Mansfield/	Date (YYYY-MM-DD)	2020-09-02
Name/Print	Hugh Mansfield	Registration Number	55757

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	Filing Date	2020-09-02
	First Named Inventor	Vincent PILON
	Art Unit	
	Examiner Name	
	Attorney Docket Number	G13569-00485-HM

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4792203	A	1988-12-20	Nelson et al.	
	2	7331722	B2	2008-02-19	Tan	
	3	7509015	B2	2009-05-24	Murano	
	4	8913866	B2	2014-12-16	Cote et al.	
	5	9008485	B2	2015-04-14	Ramirez et al.	
	6	9075216	B2	2015-07-07	Cote et al.	
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Application Number	17010113
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First Named Inventor	Vincent PILON
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	9	10514518	B2	2019-12-24	Livingston et al.	
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	3	20160033732	A1	2016-02-04	Giraud et al.	
	4	20160062050	A1	2016-03-03	Giraud et al.	
	5	20190004268	A1	2019-01-03	Vogel	
	6	20190101717	A1	2019-04-04	Pilon	
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8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Bibliographic Data

Application No: 17/010,113

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No

☐ Met After Allowance

Verified and Acknowledged: /RHONDA S PEACE/

Examiner's Signature

Initials

Title:

MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
09/02/2020	385	2874	G13569-00485-HM
RULE			

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INVENTORS

VINCENT PILON, LACHINE, CANADA

CONTINUING DATA

This application is a CON of 16143831 09/27/2018 PAT 10795107

16143831 has PRO of 62567339 10/03/2017

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

09/11/2020

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CANADA

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PE2E SEARCH - Search History (Prior Art)

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L17	5	L16 and magnet\$4	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2019/12/17 03:54 PM
L18	1494	G02B6/\$.cpc. and (magnet\$5 same (cassette or module))	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2019/12/17 03:56 PM
L19	70	G02B6/4453-4455.cpc.	(US-PGPUB; USPAT;	OR	ON	ON	2019/12/17

		and (magnet\$5)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)				04:36 PM
L20	26	(US-20160062050-\$ or US-20160062055-\$ or US-20160062058-\$ or US-20160062068-\$ or US-20170192191-\$ or US-20180003912-\$ or US-20180100976-\$ or US-20190004268-\$ or US-20190101717-\$ or US-20090290842-\$ or US-20160033732-\$ or US-20020131730-\$ or US-20070131628-\$).did. or (US- 10215944-\$ or US- 10254497-\$ or US- 9841574-\$ or US- 4792203-\$ or US- 8554044-\$ or US- 4840449-\$ or US- 8913866-\$ or US- 7509015-\$ or US- 9075216-\$ or US- 9008485-\$ or US- 7331722-\$ or US- 10281672-\$).did. or (EP-3404461-\$).did.	(US-PGPUB; USPAT; FPRS)	OR	ON	ON	2019/12/17 04:45 PM
L21	6	(US-20090290842-\$ or US-20160062050-\$ or US-20190004268-\$ or US-20190101717-\$).did. or (US- 10215944-\$ or US- 4792203-\$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2019/12/17 04:45 PM
L22	20	L20 not L21	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2019/12/17 04:46 PM
L24	1	("2019/0101717").URP N.	(USPAT)	OR	ON	ON	2020/05/18 10:11 AM
L25	35	("20020150370" "20050237721" "20110274402" "20130188919" "20150219866" "20170269324" "20190101717" "20190107682" "4595255" "4752110" "4884863" "4971421" "5208894" "5519804" "5546495" "5737475" "5825962" "5835657"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2020/05/18 10:12 AM

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L27	8985	G02B6/4453-4455.cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2020/05/18 10:24 AM
L28	674	L27 and modular	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2020/05/18 10:27 AM
L29	82	L27 and (((dissimilar or differ\$4 or varying or various or variable) near4 (size or footprint or width)) same (module or cassette))	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2020/05/18 10:37 AM
L30	2	("20190187394" "9223094").PN. OR ("10514518").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2020/05/18 10:39 AM
L31	29	(US-20160062050-\$ or US-20160062055-\$ or US-20160062058-\$ or US-20160062068-\$ or US-20170192191-\$ or US-20180003912-\$ or US-20180100976-\$ or US-20190004268-\$ or US-20190101717-\$ or US-20090290842-\$ or US-20160033732-\$ or US-20020131730-\$ or US-20070131628-\$ or US-20190107682-\$ or US-20190187394- \$).did. or (US- 10215944-\$ or US- 10254497-\$ or US- 9841574-\$ or US- 4792203-\$ or US- 8554044-\$ or US-	(US-PGPUB; USPAT; FPRS)	OR	ON	ON	2020/05/18 10:43 AM

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L33	9	(US-20020131730-\$ or US-20070131628-\$ or US-20160033732-\$).did. or (US-10281672-\$ or US-7331722-\$ or US-7509015-\$ or US-8913866-\$ or US-9008485-\$ or US-9075216-\$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2020/05/18 10:43 AM
L34	14	L31 not (L32 or L33)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2020/05/18 10:44 AM
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L36	27	((("PILON") near3 ("VINCENT"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2021/09/07 03:33 PM
L37	30	((EP-3404461-A1).did. AND FPRS.dbnm.) OR ((US-20160062050-A1	(USPAT; US-PGPUB; FPRS; USOCR; IBM_TDB; EPO; JPO;	OR	ON	ON	2021/09/07 03:50 PM

		OR US-20160062055-A1 OR US-20160062058-A1 OR US-20160062068-A1 OR US-20170192191-A1 OR US-20180003912-A1 OR US-20180100976-A1 OR US-20190004268-A1 OR US-20190101717-A1 OR US-20090290842-A1 OR US-20160033732-A1 OR US-20020131730-A1 OR US-20070131628-A1 OR US-20190107682-A1 OR US-20190187394-A1 OR US-20190162924-A1).did. AND PGPB.dbnm.) OR ((US-10215944-B2 OR US-10254497-B2 OR US-9841574-B1 OR US-4792203-A OR US-8554044-B2 OR US-4840449-A OR US-8913866-B2 OR US-7509015-B2 OR US-9075216-B2 OR US-9008485-B2 OR US-7331722-B2 OR US-10281672-B1 OR US-10514518-B1).did. AND USPT.dbnm.)	DERWENT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))				
L38	30	((EP-3404461-A1).did. AND FPRS.dbnm.) OR ((US-20160062050-A1 OR US-20160062055-A1 OR US-20160062058-A1 OR US-20160062068-A1 OR US-20170192191-A1 OR US-20180003912-A1 OR US-20180100976-A1 OR US-20190004268-A1 OR US-20190101717-A1 OR US-20090290842-A1 OR US-20160033732-A1 OR US-20020131730-A1 OR US-20070131628-A1 OR US-20190107682-A1 OR US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO)); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2021/09/07 03:50 PM

		20190187394-A1 OR US-20190162924-A1).did. AND PGPB.dbnm.) OR ((US-10215944-B2 OR US-10254497-B2 OR US-9841574-B1 OR US-4792203-A OR US-8554044-B2 OR US-4840449-A OR US-8913866-B2 OR US-7509015-B2 OR US-9075216-B2 OR US-9008485-B2 OR US-7331722-B2 OR US-10281672-B1 OR US-10514518-B1).did. AND USPT.dbnm.)					
L39	11	L38 NOT L35	(US-PGPUB; USPAT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO))	OR	ON	ON	2021/09/07 03:51 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N23	72	((cassette or module) and metal\$4 and optic\$4 and (fiber or fibre) and magnet\$4 and (tray or housing or drawer or slide)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2019/12/17 04:33 PM
N35	3	(tray and cassette and (fiber or fibre) and optic\$4 and standard and width and (fasten\$4 or lock\$4 or secur\$4 or attach\$4 or fix\$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2020/05/18 10:48 AM
N36	7	(tray and cassette and (fiber or fibre) and optic\$4 and width and (fasten\$4 or lock\$4 or secur\$4 or attach\$4 or fix\$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2020/05/18 10:49 AM

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1 Place Ville Marie, Suite 4000
Montreal, QC H3B 4M4
CANADA



**Courtesy Reminder for
Application Serial No: 17/010,113**

Attorney Docket No: G13569-00485-HM
Customer Number: 25545
Date of Electronic Notification: 09/10/2021

This is a courtesy reminder that new correspondence is available for this application. If you have not done so already, please review the correspondence. The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

An email notification regarding the correspondence was sent to the following email address(es) associated with your customer number:
uspto@lavery.ca

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	BELDEN CANADA ULC	Customer Number:	25545
Docket No.:	G13569-00485-HM	Confirmation No.:	1019
Serial No.:	17/010,113	Group Art:	2874
Filing Date:	September 2, 2020	Examiner:	Rhonda S. Peace
Title:	MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO NON-FINAL OFFICE ACTION

Sir:

In response to the Official Action dated September 10, 2021 in connection with the above-identified patent application, please consider the following amendments and remarks. Response to the Office Action is due on December 10, 2021.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 6 of this paper.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace prior versions and listings of claims in the application:

Claims have been amended as follows: Underlines indicate insertions and ~~strikethrough~~ indicate deletions.

Listing of claims:

1. (original) A modular fiber optic cassette system, the system comprising:
a case comprising a top and a bottom wall and two opposed side walls, each of said sidewalls attached between respective side edges of said top and bottom wall, said walls together defining a tray receiving space there between and a forward edge of each said wall together defining an opening to said tray receiving space;
at least one tray slideably received within said tray receiving space for movement between a stored position wherein said tray is completely inside said tray receiving space and an accessible position wherein a front end of said tray is in front of said opening and outside of said tray receiving space;
a set of fiber optic cassettes, a selected plurality of the cassettes arrangeable side by side along said tray front end wherein each of said cassettes comprises a plurality of optic plug receiving receptacles arranged side by side in a row along a front thereof, a first of said set of cassettes comprising a first cassette width of one of one, two, three, four and six standard width units and a second of said cassettes comprising a second cassette width different from said first cassette width and one of one, two, three, four and six standard width units; and
a fastener for removeably securing each of said cassettes to said tray;
wherein when arranged on the tray each of said selected cassettes is directly

adjacent at least one other selected cassette.

2. (original) The modular fiber optic cassette system of Claim 1, wherein said tray has a width dimensioned to receive at least twelve standard width units side by side.

3. (original) The modular fiber optic cassette system of Claim 1, wherein each of said cassettes comprises a multi fiber connector receiving receptacle arranged on a rear thereof and a plurality of optic fibers, one of said optic fibers interconnecting a respective one of said optic plug receiving receptacles with said multi fiber connector receiving receptacle.

4. (original) The modular fiber optic cassette system of Claim 1, wherein each of said cassettes comprises four fiber optic plug receiving receptacles arranged side by side in a row along a front thereof for each standard width unit.

5. (original) The modular fiber optic cassette system of Claim 1, wherein said system is for mounting in a rack and further comprising a pair of mounting brackets, one of said brackets attached to each of said sidewalls on either side of an outside of said case, said mounting brackets for securing said case to the rack.

6. (original) The modular fiber optic cassette system of Claim 1, wherein said tray is manufactured from a ferrous metal and said fastener comprises a magnet.

7. (original) The modular fiber optic cassette system of Claim 1, further comprising at least one elongate cable management bracket comprising a cable management loop and a fastener for removeably securing said at least one bracket to said tray, said bracket having a bracket width of one of said standard width units and further wherein when installed on said tray adjacent an installed one of said cassettes, said cable

management loop is positioned in front of and to a side of said plurality of optic plug receiving receptacles of said installed cassette.

8. (original) A method for organising a tray comprising a front edge in a fiber optic interconnect system, the method comprising:

defining a standard width unit wherein a width of the front edge is substantially evenly divisible by said standard width unit;

selecting a plurality of cassettes for installation on the tray from a set of cassettes having a plurality of different widths, wherein each of said different widths is evenly divisible by said standard width unit; and

releasably securing said selected cassettes along the front edge of the tray;

wherein when arranged on the tray each of said selected cassettes is directly adjacent at least one other selected cassette.

9. (original) The method for organising a tray of Claim 8, wherein said set of cassettes comprises cassettes comprising widths of one, two, three, four and six standard width units.

10. (original) The method for organising a tray of Claim 8, wherein said selected cassettes all comprise the same width.

11. (original) The method for organising a tray of Claim 8, wherein said selected cassettes comprise a first cassette having a first width and a second cassette having a second width different from said first width.

12. (original) The method for organising a tray of Claim 8, wherein the width of the front edge is substantially evenly divisible by a maximum of twelve (12) of said standard width units.

13. (original) The method for organising a tray of Claim 11, wherein said selected cassettes further comprise a third cassette comprising a third width different from said first width and said second width.

REMARKS

Claims 1 to 13 remain in the case. Reconsideration in view of the following remarks and entry of the foregoing amendments are respectfully requested.

REJECTION UNDER 35 U.S.C. § 102(a)(2)

Claims 1-5 and 8-13 have been rejected as being anticipated by Sedor et al. ("US 10,215,944") under 35 U.S.C. § 102. Applicants respectfully traverse the rejection as follows.

Claim 1 claims a modular fiber optic cassette system comprising *inter alia* a first set of cassettes comprising a first cassette width of one, two, three, four and six standard width units and a second cassette comprising a second cassette width different from said first cassette width and one of one, two, three, four and six standard width units.

Sedor et al. discloses a modular fiber optic tray comprising fiber optic modules which are configured to engage with rails. In particular with reference to Fig. 7, Fig. 9 and Fig. 11 Sedor et. al. discloses respectively two 12-optical fiber modules (30), three 8-optical fiber modules (40) and single 24-optical fiber module (20) all which fit in the same space of the tray. If, as characterized by the Examiner in his Official Action, each 8-optical fiber module (40) is of two unit widths 2U, the 12-optical fiber modules (30) would not have a width of 3U. Indeed, as clearly shown in the figures, the 3 8-optical fiber modules (40) and 2 rails (180) occupy the same space as 2 12-optical fiber modules (40) and a single rail (180), or $3 \times 2U + 2 \times (\text{width of rail}) = 2 \times \text{width of 12-optical fiber modules (40)} + \text{width of rail}$, or width of 12-optical fiber modules (40) = $3U + \frac{1}{2}$ the width of a rail (180).

Clearly, therefore, Sedor et al. fails to disclose a system where the cassettes have the dimensions of the those as claimed at Claim 1.

Additionally, the optical fiber modules cannot be said to be directly adjacent to at least one other selected cassette. In this regard, Applicant notes that all of the modules of Sedor et al. are separated by a rail. Applicant also notes that according to the Examiner, on a broadest reasonable interpretation, “directly adjacent” would not preclude an intervening structure between the objects. Applicant respectfully disagrees. Indeed, such an interpretation effectively assigns no weight to the adjective “directly”. Applicant also submits that a person of ordinary skill in the art would clearly understand that the modification of adjacent by “directly” was clearly intended to exclude any intervening structure, and such that, although the cassettes may be separated by a relatively small gap, cassettes which are “directly adjacent” are almost touching or touching without any intervening structure.

Applicant submits, therefore, that Sedor et al. fails to disclose a system where the cassettes are directly adjacent to one another as claimed at Claim 1.

In view of the above, Applicant submits that Claim 1 is not anticipated by Sedor et al. and therefore an allowable claim. A similar argument applies to Claim 8 which Applicant submits is also not anticipated by Sedor et al. and therefore is also an allowable claim.

REJECTION UNDER 35 U.S.C. § 103

Claim 6 has been rejected as being unpatentable over Sedor et al. and Nelson et al. (“US 4,792,203”). Similarly, Claim 7 has been rejected as being unpatentable over Sedor et al. and Giraud et al. (“US 2016/0062050”).

Nelson et al. discloses an optical fiber distribution apparatus comprising a plurality of stacked spools. Giraud et al. discloses a fiber optic equipment comprising a plurality of modules. Similar to Sedor et al., the modules are mounted on a tray using features such as rails which are positioned between the modules.

Application No. 17/010,113
Amendment filed December 10, 2021
Office Action mailed September 10, 2021
BELDEN CANADA ULC *et al.*

Docket number: G13569-00485-HM

Nelson et al. and Giraud et al. add nothing which addresses the limitations of the disclosure of Sedor et al.

In view of the above, Applicant submits that neither Claim 6 nor Claim 7 are rendered obvious by Sedor et al, Nelson et al. and Giraud et al. taken either alone or in combination and therefore that Claims 6 and 7 are both allowable claims.

As the remaining claims all depend from an allowable claim, Applicant submits that they, too, are allowable claims.

The rejections of the original claims are believed to have been overcome by the present remarks and the introduction of new claims. From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such an action is earnestly solicited.

Respectfully submitted,

Date: December 10, 2021

/Hugh Mansfield/

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Registration No.: 55757
Agent of Applicant

Encl.
HM/mad

Electronic Acknowledgement Receipt	
EFS ID:	44485132
Application Number:	17010113
International Application Number:	
Confirmation Number:	1019
Title of Invention:	MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD
First Named Inventor/Applicant Name:	VINCENT PILON
Customer Number:	25545
Filer:	Hugh Mansfield
Filer Authorized By:	
Attorney Docket Number:	G13569-00485-HM
Receipt Date:	10-DEC-2021
Filing Date:	02-SEP-2020
Time Stamp:	12:18:28
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment		no			
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		2501-USPTO-AMENDMENT-Response_to_OA_210910.pdf	46738	yes	8
			e7cd96cacb65ae01baebdc38634b82e68c1d083		

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	5
	Applicant Arguments/Remarks Made in an Amendment	6	8
Warnings:			
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Total Files Size (in bytes):		46738	
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 17/010,113		Filing Date 09/02/2020		☐ To be Mailed			
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO											
APPLICATION AS FILED - PART I											
		(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A					
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))		N/A		N/A		N/A					
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A					
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 = *				x \$100 =					
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 = *				x \$460 =					
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))											
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL					
APPLICATION AS AMENDED - PART II											
		(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	12/10/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 13	Minus	** 20	= 0		x \$100 =		0		
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x \$480 =		0		
	☐ Application Size Fee (37 CFR 1.16(s))										
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
								TOTAL ADD'L FEE		0	
		(Column 1)		(Column 2)		(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=		x \$0 =				
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x \$0 =				
	☐ Application Size Fee (37 CFR 1.16(s))										
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
								TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.								LIE			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".								/MARCUS A PRIDGEN/			
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".											
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.											

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/010,113	09/02/2020	VINCENT PILON	G13569-00485-HM	1019

25545	7590	12/21/2021
Lavery, De Billy, LLP 1 Place Ville Marie, Suite 4000 Montreal, QUEBEC H3B 4M4 CANADA		

EXAMINER	
PEACE, RHONDA S	

ART UNIT	PAPER NUMBER
2874	

NOTIFICATION DATE	DELIVERY MODE
12/21/2021	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):

uspto@lavery.ca

DETAILED ACTION

Notice of Pre-AIA or AIA Status

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

Response to Arguments

Applicant's arguments filed 12/10/21 have been fully considered but they are not persuasive.

Applicant argues Sedor et al (US 10,215,944) fails to disclose a system where the cassettes have the dimensions as required by the claim. For example, Applicant argues if module 40 is of 2 unit widths, module 30 does not have a width of 3 unit widths, and instead has a width of 3 unit widths plus half the width of a rail 180. The Examiner respectfully disagrees.

The unit width of a module is not determined by its relationship with respect to a rail mounted on the same tray, but instead by the definitions set forth by the Specification.

Paragraph [0015] of the Specification defines one standardized width unit accommodates a single receptacle module comprising four receptacles. In the Figures of the Specification, a 2W cassette 32 comprising two (2) modules 52 accommodating eight (8) optic fibers (Figure 4A) is provided, a 3W cassette 32 comprising three (3) modules 52 accommodating twelve (12) optic fibers (Figure 4B) is provided.

In Sedor et al, module 40 accommodates eight receptacles, and therefore using Applicant's definition as provided in [0015], is two standard unit widths. Similarly,

module 30 accommodates twelve receptacles, and therefore using Applicant's definition as provided in [0015], and therefore is three standards widths.

For these reasons, Applicant's arguments filed 12/10/21 are unpersuasive, and the rejection as set forth in the Office Action mailed 9/10/21 is maintained.

Claim Rejections - 35 USC § 102

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

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)(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.

Claim(s) 1-5 and 8-13 is/are rejected under 35 U.S.C. 102(a)(2) as being anticipated by Sedor et al (US 10,215,944 B2).

Re. Claim 1, Sedor et al discloses a modular fiber optic cassette system 50 (Fig 1A; col. 4 lines 14-16), the system comprising:

a case 100 comprising a top wall 102 and a bottom wall 112 and two opposed side walls 104/106, each of said sidewalls 104/106 attached between respective side edges of said top and bottom wall 102/112, said walls together defining a tray receiving

space there between and a forward edge of each said wall together defining an opening to said tray receiving space (Figs 1A and 2A-2C; col. 4 lines 36-51);

at least one tray 120 slideably received within said tray receiving space for movement between a stored position wherein said tray 120 is completely inside said tray receiving space and an accessible position wherein a front end of said tray 120 is in front of said opening and outside of said tray receiving space (Figs 1A, 1B, and 5; col. 4 lines 62-67; col. 5 lines 1-22);

a set of fiber optic cassettes 30/40, a selected plurality of the cassettes arrangeable side by side along said tray front end wherein each of said cassettes comprises a plurality of optic plug receiving receptacles arranged side by side in a row along a front thereof, a first 40 of said set of cassettes 30/40 comprising a first cassette width of one of one, two, three, four and six standard width units (i.e. first cassette 40 has a width of two standard width units; Figs 9-10) and a second of said cassettes 30 comprising a second cassette width different from said first cassette width and one of one, two, three, four and six standard width units (i.e. second cassette 30 of Figs 7-8 has a width of three standard width units) (Figs 7-10; col. 4 lines 19-35; col. 5 lines 39-47); and

a fastener 180 for removeably securing each of said cassettes 30/40 to said tray 120 (Figs 6B and 7-10; col. 5 lines 23-47),

wherein when arranged on the tray 120, each of said fiber optic cassettes 30/40 is directly adjacent at least one other fiber optic cassette 30/40 (Figs 7-10).

It is of note, for purposes of Sedor et al, one standardized width unit accommodates four receptacles, as in the current invention.

Also, “directly adjacent” is not specifically defined by Applicant’s disclosure, and therefore interpreted according to the broadest reasonable interpretation of the phrase. Broadly, the term “adjacent” in reference to objects requires the objects be in the general vicinity of each other. “Directly adjacent” is interpreted as requiring a smaller distance between objects (as opposed to “adjacent”), but does not preclude intervening structure between the objects, and instead only requires the objects are placed closely together. The cassettes of Sedor et al, while having rails placed therebetween, are nonetheless situated very close to each other and therefore meet the claim limitation of being “directly adjacent.”

Re. Claim 2, Sedor et al discloses said tray 120 has a width dimensioned to receive at least twelve standard width units side by side (Figs 7-10; col. 5 lines 35-51).

Re. Claim 3, Sedor et al discloses each of said cassettes 30/40 comprises a multi-fiber connector receiving receptacle arranged on a rear thereof and a plurality of optic fibers, one of said optic fibers interconnecting a respective one of said optic plug receiving receptacles with said multi fiber connector receiving receptacle (Figs 7-10; col. 4 lines 23-31).

Re. Claim 4, Sedor et al discloses each of said cassettes 30/40 comprises four fiber optic plug receiving receptacles arranged side by side in a row along a front thereof for each standard width unit (Figs 7-10; col. 4 lines 19-35; col. 5 lines 39-47).

Re. Claim 5, Sedor et al discloses said system 50 is for mounting in a rack 2/4 and further comprising a pair of mounting brackets 108, one of said brackets 108 attached to each of said sidewalls 104/106 on either side of an outside of said case 100,

said mounting brackets 108 for securing said case 100 to the rack 2/4 (Fig 1A; col. 4 lines 51-54).

Re. Claim 8, Sedor et al discloses a method for organizing a tray comprising a front edge in a fiber optic interconnect system, the method comprising:

defining a standard width unit wherein a width of the front edge is substantially evenly divisible by said standard width unit (col. 1 lines 24-32);

selecting a plurality of cassettes for installation on the tray from a set of cassettes 30/40 having a plurality of different widths (i.e. cassette 40 of Figs 9-10 has a width of two standard width units; second cassette 30 of Figs 7-8 has a width of three standard width units), wherein each of said different widths is evenly divisible by said standard width unit (Figs 7-10; col. 4 lines 19-35; col. 5 lines 39-47); and

releasably securing said selected cassettes along the front edge of the tray 120 (Figs 6B and 7-10; col. 5 lines 23-47);

wherein when arranged on the tray 120, each of said fiber optic cassettes 30/40 is directly adjacent at least one other selected fiber optic cassette 30/40 (Figs 7-10).

Re. Claim 9, Sedor et al discloses said set of cassettes 30/40 comprises cassettes comprising widths of one, two, three, four and six standard width units (i.e. cassette 40 of Figs 9-10 has a width of two standard width units; second cassette 30 of Figs 7-8 has a width of three standard width units) (Figs 7-10; col. 4 lines 19-35; col. 5 lines 39-47).

Re. Claim 10, Sedor et al discloses said selected cassettes all comprise the same width, for example Figures 7 and 8 show the tray filled with cassettes 30 while Figures 9-10 show the tray filled with cassettes 40.

Re. Claim 11, Sedor et al discloses said selected cassettes comprise a first cassette having a first width and a second cassette having a second width different from said first width, for example when a tray 120 is rearranged to accommodate cassettes having a different size from those previously installed on the tray (col. 5 lines 35-47).

Re. Claim 12, Sedor et al discloses the width of the front edge is substantially evenly divisible by a maximum of twelve (12) of said standard width units (Figs 7-10; col. 5 lines 35-51).

Re. Claim 13, Sedor et al discloses said selected cassettes further comprise a third cassette 20 comprising a third width different from said first width and said second width (Figs 11-12; col. 4 lines 19-31; col. 5 lines 48-51).

Claim Rejections - 35 USC § 103

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

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.

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.

Claim 6 is/are rejected under 35 U.S.C. 103 as being unpatentable over Sedor et al (US 10,215,944 B2) and Nelson et al (US 4,792,203).

Re. Claim 6, Sedor et al discloses the modular fiber optic cassette system as discussed above. Additionally, Sedor et al discloses a modular fiber optic cassette 30/40 for releasably securing to a tray 120, comprising:

an elongate rectangular optic fiber receiving housing (Figs 7-10; col. 4 lines 19-35);

a plurality of optic plug receiving receptacles arranged in a row along a front of said housing (Figs 7-10; col. 4 lines 23-26);

a multi fiber connector receiving receptacle on a rear thereof (Figs 7-10; col. 4 lines 23-26);

a plurality of optic fibers interconnecting a respective one of said optic plug receiving receptacles with said multi fiber connector receiving receptacle (col. 1 lines 21-23; col. 4 lines 23-26); and

a fastener 180 secured to an underside of said housing (i.e. an outer bottom edge of the housing slides and is retained on a portion of the fastener 180 (Figs 6B and 26A-26B; col. 7 lines 1-29).

In Sedor et al, the fastener 180 is a rail that is removeably coupled to the tray 120, specifically protrusions on the rail mate with holes on the tray (Figs 5, 6B, 7-10, and 13A-13C; col. 5 lines 23-67; col. 6 lines 1-4). Sedor et al does not disclose alternative coupling means, such as magnetic coupling, between the fastener 180 and the tray 120. That is to say, Sedor et al does not disclose the tray being fabricated from a *ferrous metal* and the fastener comprising a *magnet*.

The use of a magnetic coupling arrangement for attaching a magnetic rail to a metallic tray surface is well known in the optical arts, as seen by Nelson et al. Nelson et al discloses a magnetic rail 60/62 for coupling to a ferrous metal tray 24 (Fig 6; col. 5 lines 24-35).

It would have been obvious to one of ordinary skill in the art to utilize a metal tray and a fastener comprising a magnet in the system of Sedor et al, since the same is a well-known arrangement of the art as evidences by Nelson et al, and is capable of achieving the attachment/detachment/reattachment nature of the fastener as desired by Sedor et al.

The claim would have been obvious because the substitution of one known element for another (i.e. the substitution of magnetized fastening means for protrusion/aperture fastener means) would have yielded predictable results to one of ordinary skill in the art at the time of the invention. *KSR International Co. v. Teleflex Inc.*, 550 USPQ2d 1385 (2007).

Claim 7 is/are rejected under 35 U.S.C. 103 as being unpatentable over Sedor et al (US 10,215,944 B2) and Giraud et al (US 2016/0062050 A1).

Re. Claim 7, Sedor et al discloses the modular fiber optic cassette system of as discussed above.

However, Sedor et al does not disclose the system as further comprising *at least one elongate cable management bracket comprising a cable management loop and a fastener for removeably securing said at least one bracket to said tray, said bracket having a bracket width of one of said standard width units and further wherein when installed on said tray adjacent an installed one of said cassettes, said cable management loop is positioned in front of and to a side of said plurality of optic plug receiving receptacles of said installed cassette.*

Giraud et al discloses a modular fiber optic cassette system comprising a case 300 (Fig 3A; [0060]) for retaining at least one slideable tray 100 (Figs 2A and 2B; [0056]-[0057]), the tray 100 comprising a plurality of cassettes 10 (Figs 1A, 2A-2B, and [0053]) and at least one elongate cable management bracket 400 (Figs 6-7; [0066]) attached thereto, the cable management bracket 400 comprising a cable loop and a fastener 422 for removeably securing said at least one bracket 400 to said tray 100 (Figs 6-7; [0067]), said bracket 400 having a bracket width of one of said standard width units ([0066]) and further wherein when installed on said tray adjacent an installed one of said cassettes, said cable loop is positioned in front of and to a side of said plurality of optic plug receiving receptacles of said installed cassette (Fig 7).

It would have been obvious to one of ordinary skill at the time the invention was effectively filed to include the cable management bracket of Giraud et al in the system of

Sedor et al, since Giraud et al discloses the cable management bracket provides the network operator flexibility in the optical network to make moves, adds, and changes to transmission protocol as desired while maintaining a neat and orderly cable deployment and routing for the data center (Giraud et al: [0065]).

While Giraud et al discloses a cable loop is formed at the forward end of the bracket 400 (i.e. cable looped from adapter 418 through cut-out 411; Fig 6-7; [0066]-[0067]), Giraud et al fails to disclose *a cable management loop* to support said cable loop.

The use of management loops to support a looped length of optical cable is well known in the art, and commonly used to impact structural stability of the cable loop, thereby minimizing damage to the cable. The claimed cable management loop would have been obvious to one of ordinary skill for the purpose of minimizing damage to the optical cable of Giraud et al. “A person of ordinary skill is also a person of ordinary creativity, not an automaton” – “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.” *KSR International Co. v. Teleflex Inc.*, 550 USPQ2d 1385 (2007).

Conclusion

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 R. PEACE whose telephone number is (571)272-8580. The examiner can normally be reached on 9-5 pm.

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, Uyen-Chau Le can be reached on (571) 272-2397. 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.

/RHONDA S PEACE/
Primary Examiner, Art Unit 2874
12/16/21

Search Notes 	Application/Control No. 17/010,113	Applicant(s)/Patent Under Reexamination PILON, VINCENT
	Examiner R. PEACE	Art Unit 2874

CPC - Searched*		
Symbol	Date	Examiner

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
inventor search	09/07/2021	RSP
global dossier search	09/07/2021	RSP
see attached SEARCH history notes	09/07/2021	RSP
see attached SEARCH history notes	12/16/2021	RSP

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/RHONDA S PEACE/ Primary Examiner, Art Unit 2874	
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PE2E SEARCH - Search History (Prior Art)

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		and (magnet\$5)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)				04:36 PM
L20	26	(US-20160062050-\$ or US-20160062055-\$ or US-20160062058-\$ or US-20160062068-\$ or US-20170192191-\$ or US-20180003912-\$ or US-20180100976-\$ or US-20190004268-\$ or US-20190101717-\$ or US-20090290842-\$ or US-20160033732-\$ or US-20020131730-\$ or US-20070131628-\$).did. or (US- 10215944-\$ or US- 10254497-\$ or US- 9841574-\$ or US- 4792203-\$ or US- 8554044-\$ or US- 4840449-\$ or US- 8913866-\$ or US- 7509015-\$ or US- 9075216-\$ or US- 9008485-\$ or US- 7331722-\$ or US- 10281672-\$).did. or (EP-3404461-\$).did.	(US-PGPUB; USPAT; FPRS)	OR	ON	ON	2019/12/17 04:45 PM
L21	6	(US-20090290842-\$ or US-20160062050-\$ or US-20190004268-\$ or US-20190101717-\$).did. or (US- 10215944-\$ or US- 4792203-\$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2019/12/17 04:45 PM
L22	20	L20 not L21	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2019/12/17 04:46 PM
L24	1	("2019/0101717").URP N.	(USPAT)	OR	ON	ON	2020/05/18 10:11 AM
L25	35	("20020150370" "20050237721" "20110274402" "20130188919" "20150219866" "20170269324" "20190101717" "20190107682" "4595255" "4752110" "4884863" "4971421" "5208894" "5519804" "5546495" "5737475" "5825962" "5835657"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2020/05/18 10:12 AM

		"5898129" "6226436" "6438310" "6496640" "6504988" "6748155" "6944389" "7970249" "8009954" "8154886" "8554044" "9008485" "9366837" "9423585" "9575274" "9588317" "9791653").PN. OR ("10641980").URPN.					
L26	77	("20030223723" "4900123" "5915802" "6282360" "6356697" "6758600" "6869227" "6925241" "7205481" "7333706").PN. OR ("7509015").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2020/05/18 10:18 AM
L27	8985	G02B6/4453-4455.cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2020/05/18 10:24 AM
L28	674	L27 and modular	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2020/05/18 10:27 AM
L29	82	L27 and (((dissimilar or differ\$4 or varying or various or variable) near4 (size or footprint or width)) same (module or cassette))	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2020/05/18 10:37 AM
L30	2	("20190187394" "9223094").PN. OR ("10514518").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2020/05/18 10:39 AM
L31	29	(US-20160062050-\$ or US-20160062055-\$ or US-20160062058-\$ or US-20160062068-\$ or US-20170192191-\$ or US-20180003912-\$ or US-20180100976-\$ or US-20190004268-\$ or US-20190101717-\$ or US-20090290842-\$ or US-20160033732-\$ or US-20020131730-\$ or US-20070131628-\$ or US-20190107682-\$ or US-20190187394- \$).did. or (US- 10215944-\$ or US- 10254497-\$ or US- 9841574-\$ or US- 4792203-\$ or US- 8554044-\$ or US-	(US-PGPUB; USPAT; FPRS)	OR	ON	ON	2020/05/18 10:43 AM

		4840449-\$ or US-8913866-\$ or US-7509015-\$ or US-9075216-\$ or US-9008485-\$ or US-7331722-\$ or US-10281672-\$ or US-10514518-\$).did. or (EP-3404461-\$).did.					
L32	6	(US-20090290842-\$ or US-20160062050-\$ or US-20190004268-\$ or US-20190101717-\$).did. or (US-10215944-\$ or US-4792203-\$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2020/05/18 10:43 AM
L33	9	(US-20020131730-\$ or US-20070131628-\$ or US-20160033732-\$).did. or (US-10281672-\$ or US-7331722-\$ or US-7509015-\$ or US-8913866-\$ or US-9008485-\$ or US-9075216-\$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2020/05/18 10:43 AM
L34	14	L31 not (L32 or L33)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2020/05/18 10:44 AM
L35	19	("10215944" OR "10281672" OR "10514518" OR "20070131628" OR "20090290842" OR "20160033732" OR "20160062050" OR "20190004268" OR "20190101717" OR "20190107682" OR "20190162924" OR "20190187394" OR "20200131730" OR "4792203" OR "7331722" OR "7509015" OR "8913866" OR "9008485" OR "9075216").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2021/09/07 02:14 PM
L36	27	((("PILON") near3 ("VINCENT"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2021/09/07 03:33 PM
L37	30	((EP-3404461-A1).did. AND FPRS.dbnm.) OR ((US-20160062050-A1	(USPAT; US-PGPUB; FPRS; USOCR; IBM_TDB; EPO; JPO;	OR	ON	ON	2021/09/07 03:50 PM

		OR US-20160062055-A1 OR US-20160062058-A1 OR US-20160062068-A1 OR US-20170192191-A1 OR US-20180003912-A1 OR US-20180100976-A1 OR US-20190004268-A1 OR US-20190101717-A1 OR US-20090290842-A1 OR US-20160033732-A1 OR US-20020131730-A1 OR US-20070131628-A1 OR US-20190107682-A1 OR US-20190187394-A1 OR US-20190162924-A1).did. AND PGPB.dbnm.) OR ((US-10215944-B2 OR US-10254497-B2 OR US-9841574-B1 OR US-4792203-A OR US-8554044-B2 OR US-4840449-A OR US-8913866-B2 OR US-7509015-B2 OR US-9075216-B2 OR US-9008485-B2 OR US-7331722-B2 OR US-10281672-B1 OR US-10514518-B1).did. AND USPT.dbnm.)	DERWENT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))				
L38	30	((EP-3404461-A1).did. AND FPRS.dbnm.) OR ((US-20160062050-A1 OR US-20160062055-A1 OR US-20160062058-A1 OR US-20160062068-A1 OR US-20170192191-A1 OR US-20180003912-A1 OR US-20180100976-A1 OR US-20190004268-A1 OR US-20190101717-A1 OR US-20090290842-A1 OR US-20160033732-A1 OR US-20020131730-A1 OR US-20070131628-A1 OR US-20190107682-A1 OR US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO)); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2021/09/07 03:50 PM

		20190187394-A1 OR US-20190162924-A1).did. AND PGPB.dbnm.) OR ((US-10215944-B2 OR US-10254497-B2 OR US-9841574-B1 OR US-4792203-A OR US-8554044-B2 OR US-4840449-A OR US-8913866-B2 OR US-7509015-B2 OR US-9075216-B2 OR US-9008485-B2 OR US-7331722-B2 OR US-10281672-B1 OR US-10514518-B1).did. AND USPT.dbnm.)					
L39	11	L38 NOT L35	(US-PGPUB; USPAT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO))	OR	ON	ON	2021/09/07 03:51 PM
L40	2	"6208593".pn.	(US-PGPUB; USPAT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO))	OR	ON	ON	2021/12/16 02:15 PM
L41	15	"2030171"	(US-PGPUB; USPAT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO))	OR	ON	ON	2021/12/16 02:16 PM
L42	30	((EP-3404461-A1).did. AND FPRS.dbnm.) OR ((US-20160062050-A1 OR US-20160062055-A1 OR US-20160062058-A1 OR US-20160062068-A1 OR US-20170192191-A1 OR US-20180003912-A1 OR US-20180100976-A1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO)); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2021/12/16 02:29 PM

		OR US-20190004268-A1 OR US-20190101717-A1 OR US-20090290842-A1 OR US-20160033732-A1 OR US-20020131730-A1 OR US-20070131628-A1 OR US-20190107682-A1 OR US-20190187394-A1 OR US-20190162924-A1).did. AND PGPB.dbnm.) OR ((US-10215944-B2 OR US-10254497-B2 OR US-9841574-B1 OR US-4792203-A OR US-8554044-B2 OR US-4840449-A OR US-8913866-B2 OR US-7509015-B2 OR US-9075216-B2 OR US-9008485-B2 OR US-7331722-B2 OR US-10281672-B1 OR US-10514518-B1).did. AND USPT.dbnm.)					
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PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N23	72	((cassette or module) and metal\$4 and optic\$4 and (fiber or fibre) and magnet\$4 and (tray or housing or drawer or slide)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2019/12/17 04:33 PM
N35	3	(tray and cassette and (fiber or fibre) and optic\$4 and standard and width and (fasten\$4 or lock\$4 or secur\$4 or attach\$4 or fix\$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2020/05/18 10:48 AM
N36	7	(tray and cassette and (fiber or fibre) and optic\$4 and width and (fasten\$4 or lock\$4 or secur\$4 or attach\$4 or fix\$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2020/05/18 10:49 AM

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Montreal, QC H3B 4M4
CANADA



**Courtesy Reminder for
Application Serial No: 17/010,113**

Attorney Docket No: G13569-00485-HM
Customer Number: 25545
Date of Electronic Notification: 12/21/2021

This is a courtesy reminder that new correspondence is available for this application. If you have not done so already, please review the correspondence. The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

An email notification regarding the correspondence was sent to the following email address(es) associated with your customer number:
uspto@lavery.ca

To view your correspondence online or update your email addresses, please visit us anytime at <https://ppair-my.uspto.gov/pair/PrivatePair>.
If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov or call 1-866-217-9197.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	BELDEN CANADA ULC	Customer Number:	25545
Docket No.:	G13569-00485—HM	Confirmation No.:	1019
Serial No.:	17/010,113	Group Art:	2874
Filing Date:	September 2, 2020	Examiner:	Rhonda S. Peace
Title:	MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO FINAL OFFICE ACTION

Sir:

In response to the Final Office Action dated December 21, 2021 in connection with the above-identified patent application, please consider the following amendments and remarks. Early response to the Office Action is due on February 21, 2022.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 6 of this paper.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 17/010,113		Filing Date 09/02/2020		☐ To be Mailed			
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO											
APPLICATION AS FILED - PART I											
		(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A					
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))		N/A		N/A		N/A					
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A					
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 = *				x \$100 =					
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 = *				x \$460 =					
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))											
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL					
APPLICATION AS AMENDED - PART II											
		(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	02/18/2022	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=			x \$100 =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=			x \$480 =			
	☐ Application Size Fee (37 CFR 1.16(s))										
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
								TOTAL ADD'L FEE			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=			x \$0 =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=			x \$0 =			
	☐ Application Size Fee (37 CFR 1.16(s))										
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
								TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.								LIE			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".								/ANGELA S WHITE/			
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".											
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.											

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 17/010,113		Filing Date 09/02/2020		☐ To be Mailed			
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO											
APPLICATION AS FILED - PART I											
		(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A					
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))		N/A		N/A		N/A					
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A					
TOTAL CLAIMS (37 CFR 1.16(j))		minus 20 = *				x \$100 =					
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 = *				x \$460 =					
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))											
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL					
APPLICATION AS AMENDED - PART II											
		(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	02/18/2022	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(j))	* 13	Minus	** 20	= 0		x \$100 =		0		
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x \$480 =		0		
	☐ Application Size Fee (37 CFR 1.16(s))										
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
								TOTAL ADD'L FEE		0	
		(Column 1)		(Column 2)		(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(j))	*	Minus	**	=		x \$0 =				
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x \$0 =				
	☐ Application Size Fee (37 CFR 1.16(s))										
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
								TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.								LIE			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".								/ANGELA S WHITE/			
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".											
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.											

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	BELDEN CANADA ULC	Customer Number:	25545
Docket No.:	G13569-00485—HM	Confirmation No.:	1019
Serial No.:	17/010,113	Group Art:	2874
Filing Date:	September 2, 2020	Examiner:	Rhonda S. Peace
Title:	MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO FINAL OFFICE ACTION

Sir:

In response to the Final Office Action dated December 21, 2021 in connection with the above-identified patent application, please consider the following amendments and remarks. Early response to the Office Action is due on February 21, 2022.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 6 of this paper.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace prior versions and listings of claims in the application:

Claims have been amended as follows: Underlines indicate insertions and ~~strikethrough~~ indicate deletions.

Listing of claims:

1. (original) A modular fiber optic cassette system, the system comprising:
 - a case comprising a top and a bottom wall and two opposed side walls, each of said sidewalls attached between respective side edges of said top and bottom wall, said walls together defining a tray receiving space there between and a forward edge of each said wall together defining an opening to said tray receiving space;
 - at least one tray slideably received within said tray receiving space for movement between a stored position wherein said tray is completely inside said tray receiving space and an accessible position wherein a front end of said tray is in front of said opening and outside of said tray receiving space;
 - a set of fiber optic cassettes, a selected plurality of the cassettes arrangeable side by side along said tray front end wherein each of said cassettes comprises a plurality of optic plug receiving receptacles arranged side by side in a row along a front thereof, a first of said set of cassettes comprising a first cassette width of one of one, two, three, four and six standard width units and a second of said cassettes comprising a second cassette width different from said first cassette width and one of one, two, three, four and six standard width units; and
 - a fastener for removeably securing each of said cassettes to said tray;
- wherein when arranged on the tray each of said selected cassettes is directly adjacent at least one other selected cassette.

2. (original) The modular fiber optic cassette system of Claim 1, wherein said tray has a width dimensioned to receive at least twelve standard width units side by side.

3. (original) The modular fiber optic cassette system of Claim 1, wherein each of said cassettes comprises a multi fiber connector receiving receptacle arranged on a rear thereof and a plurality of optic fibers, one of said optic fibers interconnecting a respective one of said optic plug receiving receptacles with said multi fiber connector receiving receptacle.

4. (original) The modular fiber optic cassette system of Claim 1, wherein each of said cassettes comprises four fiber optic plug receiving receptacles arranged side by side in a row along a front thereof for each standard width unit.

5. (original) The modular fiber optic cassette system of Claim 1, wherein said system is for mounting in a rack and further comprising a pair of mounting brackets, one of said brackets attached to each of said sidewalls on either side of an outside of said case, said mounting brackets for securing said case to the rack.

6. (original) The modular fiber optic cassette system of Claim 1, wherein said tray is manufactured from a ferrous metal and said fastener comprises a magnet.

7. (original) The modular fiber optic cassette system of Claim 1, further comprising at least one elongate cable management bracket comprising a cable management loop and a fastener for removeably securing said at least one bracket to said tray, said bracket having a bracket width of one of said standard width units and further wherein when installed on said tray adjacent an installed one of said cassettes, said cable management loop is positioned in front of and to a side of said plurality of optic plug receiving receptacles of said installed cassette.

8. (original) A method for organising a tray comprising a front edge in a fiber optic interconnect system, the method comprising:

defining a standard width unit wherein a width of the front edge is substantially evenly divisible by said standard width unit;
selecting a plurality of cassettes for installation on the tray from a set of cassettes having a plurality of different widths, wherein each of said different widths is evenly divisible by said standard width unit; and
releasably securing said selected cassettes along the front edge of the tray;
wherein when arranged on the tray each of said selected cassettes is directly adjacent at least one other selected cassette.

9. (original) The method for organising a tray of Claim 9, wherein said set of cassettes comprises cassettes comprising widths of one, two, three, four and six standard width units.

10. (original) The method for organising a tray of Claim 9, wherein said selected cassettes all comprise the same width.

11. (original) The method for organising a tray of Claim 9, wherein said selected cassettes comprise a first cassette having a first width and a second cassette having a second width different from said first width.

12. (original) The method for organising a tray of Claim 9, wherein the width of the front edge is substantially evenly divisible by a maximum of twelve (12) of said standard width units.

13. (original) The method for organising a tray of Claim 12, wherein said selected cassettes further comprise a third cassette comprising a third width different from said first width and said second width.

REMARKS

Claims 1 to 13 remain in the case.

In his response to arguments part, the Examiner States "... [t]he unit width of a module is not determined by its relationship with respect to a rail mounted on the same tray, but instead by the definitions set forth by the Specification." The Examiner continues on to find that as paragraph [0015] provides that a single receptacle accommodates four receptacles, then it is the presence of four receptacles that define the width, not the actual width, and therefore Sedor et al., which comprises 8 receptacles, discloses "two standard widths".

Applicant respectfully disagrees with the Examiner's characterization of width and her finding that paragraph [0015] defines the width in terms of the number of receptacles. Indeed, nowhere does the specification define width in such a fashion. In particular, such a definition of width makes no sense when viewed in respect to Claim 8, and where the standard width is defined in terms of a width of a front edge of a tray on which the cassettes are secured.

Clearly, therefore, a person of ordinary skill in the art would understand that the width of a cassette is simply the width of the cassette from side to side and not some other "dimension" such as the number of receptacles or the like.

REJECTION UNDER 35 U.S.C. § 102(a)(2)

Claims 1-5 and 8-13 have been rejected as being anticipated by Sedor et al. ("US 10,215,944") under 35 U.S.C. § 102. Applicants respectfully traverse the rejection as follows.

Claim 1 claims a modular fiber optic cassette system comprising *inter alia* a first set of cassettes comprising a first cassette width of one, two, three, four and six standard width units and a second cassette comprising a second cassette width different from said first cassette

width and one of one, two, three, four and six standard width units.

Sedor et al. discloses a modular fiber optic tray comprising fiber optic modules which are configured to engage with rails. In particular with reference to Fig. 7, Fig. 9 and Fig. 11 Sedor et. al. discloses respectively two 12-optical fiber modules (30), three 8-optical fiber modules (40) and single 24-optical fiber module (20) all which fit in the same space of the tray. If, as characterized by the Examiner in his Official Action, each 8-optical fiber module (40) is of two unit widths $2U$, the 12-optical fiber modules (30) would not have a width of $3U$. Indeed, as clearly shown in the figures, the 3 8-optical fiber modules (40) and 2 rails (180) occupy the same space as 2 12-optical fiber modules (40) and a single rail (180), or $3 \cdot 2U + 2 \cdot (\text{width of rail}) = 2 \cdot \text{width of 12-optical fiber modules (40)} + \text{width of rail}$, or width of 12-optical fiber modules (40) = $3U + \frac{1}{2}$ the width of a rail (180).

Clearly, therefore, Sedor et al. fails to disclose a system where the cassettes have the dimensions of the those as claimed at Claim 1.

Additionally, the optical fiber modules cannot be said to be directly adjacent to at least one other selected cassette. In this regard, Applicant notes that all of the modules of Sedor et al. are separated by a rail. Applicant also notes that according to the Examiner, on a broadest reasonable interpretation, “directly adjacent” would not preclude an intervening structure between the objects. Applicant respectfully disagrees. Indeed, such an interpretation effectively assigns no weight to the adjective “directly”. Applicant also submits that a person of ordinary skill in the art would clearly understand that the modification of adjacent by “directly” was clearly intended to exclude any intervening structure, and such that, although the cassettes may be separated by a relatively small gap, cassettes which are “directly adjacent” are almost touching or touching without any intervening structure.

Applicant submits, therefore, that Sedor et al. fails to disclose a system where the cassettes are directly adjacent to one another as claimed at Claim 1.

In view of the above, Applicant submits that Claim 1 is not anticipated by Sedor et al. and therefore an allowable claim. A similar argument applies to Claim 8 which Applicant submits is also not anticipated by Sedor et al. and therefore is also an allowable claim.

REJECTION UNDER 35 U.S.C. § 103

Claim 6 has been rejected as being unpatentable over Sedor et al. and Nelson et al. ("US 4,792,203"). Similarly, Claim 7 has been rejected as being unpatentable over Sedor et al. and Giraud et al. ("US 2016/0062050").

Nelson et al. discloses an optical fiber distribution apparatus comprising a plurality of stacked spools. Giraud et al. discloses a fiber optic equipment comprising a plurality of modules. Similar to Sedor et al., the modules are mounted on a tray using features such as rails which are positioned between the modules.

Nelson et al. and Giraud et al. add nothing which addresses the limitations of the disclosure of Sedor et al.

In view of the above, Applicant submits that neither Claim 6 nor Claim 7 are rendered obvious by Sedor et al, Nelson et al. and Giraud et al. taken either alone or in combination and therefore that Claims 6 and 7 are both allowable claims.

As the remaining claims all depend from an allowable claim, Applicant submits that they, too, are allowable claims.

The rejections of the original claims are believed to have been overcome by the present remarks and the introduction of new claims. From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such an action is earnestly solicited.

Application No. 17/010,113
Amendment filed February 21, 2022
Final Office Action mailed December 21, 2021
BELDEN CANADA ULC *et al.*

Docket number: G13569-00485-HM

Respectfully submitted,

Date: February 21, 2022

/Hugh Mansfield/

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UNITED STATES
PATENT AND TRADEMARK OFFICE

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
17/010,113

RECEIPT DATE / TIME
02/18/2022 05:30:10 PM ET

ATTORNEY DOCKET #
G13569-00485-HM

Title of Invention

MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 1019

FILED BY Regeline Jean Francois

PATENT CENTER # 60539044

FILING DATE 09/02/2020

CUSTOMER # 25545

FIRST NAMED INVENTOR VINCENT PILON

CORRESPONDENCE ADDRESS -

AUTHORIZED BY Hugh Mansfield

Documents

TOTAL DOCUMENTS: 3

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
2501-USPTO-AMENDMENT-Response_to_Final_OA_date_211221.pdf	8	-	45 KB
2501-USPTO-AMENDMENT-Response_to_Final_OA_dated_211221-A.NE.pdf	(1-1) 1	Response After Final Action	15 KB
2501-USPTO-AMENDMENT-Response_to_Final_OA_dated_211221-CLM.pdf	(2-4) 3	Claims	24 KB
2501-USPTO-	(5-8) 4	Applicant Arguments/Remarks	28 KB

AMENDMENT-
Response_to_Final_OA_dated_211221-REM.pdf

Made in an Amendment

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
2501-USPTO-AMENDMENT-Response_to_Final_OA_dated_211221.pdf	B5D49C599D592EC781866D34F6195689F00FF50A5372B3BD0951124A92C7596BB03079019AFF546E5D6CE1DC6BC517A45B2AFFE8B66F66DA370B9FF35745EE80
2501-USPTO-AMENDMENT-Response_to_Final_OA_dated_211221-A.NE.pdf	817424ACF1859575B4FAB963D180D47A9FC83B4A3A124CFD531A9E88BB236DD72D078EA00E1FA955828D95FF11660D35B13CAB98765EAB5557D4A507377C20DB
2501-USPTO-AMENDMENT-Response_to_Final_OA_dated_211221-CLM.pdf	7DC82577C8E8D93E8D900F0C1F7C54CB54811D20A3009D1900A8736BEB680D43F30764C4EE611470F39B3854636EA5A43CA6C710DE3F0D2B88DE30DE086072C1
2501-USPTO-AMENDMENT-Response_to_Final_OA_dated_211221-REM.pdf	47274FA703B631D65710F529EEF64F9CB9AA98E2A27EA7863A1A190756E3A92A4D4E566675FAD3EA21FA3FD812892728A6AA37A868BE1856E19ECE7DF25CFBF9

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/010,113	09/02/2020	VINCENT PILON	G13569-00485-HM	1019

25545 7590 03/02/2022
Lavery, De Billy, LLP
1 Place Ville Marie, Suite 4000
Montreal, QUEBEC H3B 4M4
CANADA

EXAMINER	
PEACE, RHONDA S	

ART UNIT	PAPER NUMBER
2874	

NOTIFICATION DATE	DELIVERY MODE
03/02/2022	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):

uspto@lavery.ca

Advisory Action Before the Filing of an Appeal Brief	Application No. 17/010,113	Applicant(s) PILON, VINCENT	
	Examiner R. PEACE	Art Unit 2874	AIA (FITF) Status Yes

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

THE REPLY FILED 18 February 2022 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANTS FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because:

a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);

b) ☐ They raise the issue of new matter (see NOTE below);

c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____ (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): (a) ☒ will not be entered, or (b) ☐ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ A declaration(s)/affidavit(s) under 37 CFR 1.130(b) was/were filed on _____

9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See continuation sheet.

13. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____

14. ☐ Other: _____

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:
 Claim(s) allowed: _____
 Claim(s) objected to: _____
 Claim(s) rejected: 1-13.
 Claim(s) withdrawn from consideration: _____

/RHONDA S PEACE/ Primary Examiner, Art Unit 2874	
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Applicant disagrees with the Examiner's characterization of width and her finding that paragraph [0015] defines the width in terms of the number of receptacles. Applicant argues nowhere does the specification define width in such a fashion. Applicant argues such a definition of width makes no sense when viewed in respect to Claim 8, and where the standard width is defined in terms of a width of a front edge of a tray on which the cassettes are secured.

Applicant argues a person of ordinary skill in the art would understand that the width of a cassette is simply the width of the cassette from side to side and not some other "dimension" such as the number of receptacles or the like. The Examiner respectfully disagrees.

With respect to claim 8, the claim requires that the front edge of the tray is "substantially evenly divisible" by the standard width unit. Applicant's arguments regarding the modules widths as comprising a portion of the width of a rail (see pg. 6 filed 2/18/22) are unpersuasive, as they rely on the front edge of the tray being "evenly divisible" by the standard width unit. The claim does not impose such narrow requirements of the front edge of the tray.

Applicant argues the claimed term "directly adjacent" precludes arrangements such as Seder, where a rail separates adjacent cassettes. The Examiner respectfully disagrees.

Directly adjacent requires closely-placed objects. As identified by Applicant, one of ordinary skill would recognize cassettes may be separated by a small gap and still be considered "directly adjacent." The small gap allowed by this arrangement is not required by be empty.

For these reasons, Applicant's arguments are unpersuasive and the rejection is maintained.

DO NOT ENTER: /R.S.P./
02/25/2022

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	BELDEN CANADA ULC	Customer Number:	25545
Docket No.:	G13569-00485—HM	Confirmation No.:	1019
Serial No.:	17/010,113	Group Art:	2874
Filing Date:	September 2, 2020	Examiner:	Rhonda S. Peace
Title:	MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO FINAL OFFICE ACTION

Sir:

In response to the Final Office Action dated December 21, 2021 in connection with the above-identified patent application, please consider the following amendments and remarks. Early response to the Office Action is due on February 21, 2022.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 6 of this paper.

Doc code: RCEX

PTO/SB/30EFS (02-18)

Doc description: Request for Continued Examination (RCE)

Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL (Submitted Only via EFS-Web)							
Application Number	17010113	Filing Date	2020-09-02	Docket Number (if applicable)	G13569-00485-HM	Art Unit	2883
First Named Inventor	PILON, Vincent			Examiner Name			
This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application. Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV							
SUBMISSION REQUIRED UNDER 37 CFR 1.114							
Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).							
☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____ ☐ Other _____ ☒ Enclosed ☒ Amendment/Reply ☐ Information Disclosure Statement (IDS) ☐ Affidavit(s)/ Declaration(s) ☐ Other _____							
MISCELLANEOUS							
☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required) ☐ Other _____							
FEES							
The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed. ☐ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No _____							
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED							
☒ Patent Practitioner Signature Applicant Signature							

EFS - Web 2.1.16

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (02-18)

Approved for use through 11/30/2020. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	HUGH MANSFIELD/	Date (YYYY-MM-DD)	2022-04-20
Name	Hugh Mansfield	Registration Number	55757

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)		Docket Number (Optional) G13569-00485-HM
Application Number 17/010,113	Filed September 2, 2020	
For MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD		
Art Unit 2883	Examiner	

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	<u>Fee</u>	<u>Small Entity Fee</u>	<u>Micro Entity Fee</u>	
☒ One month (37 CFR 1.17(a)(1))	\$220	\$110	\$55	\$ <u>220</u>
☐ Two months (37 CFR 1.17(a)(2))	\$640	\$320	\$160	\$ _____
☐ Three months (37 CFR 1.17(a)(3))	\$1,480	\$740	\$370	\$ _____
☐ Four months (37 CFR 1.17(a)(4))	\$2,320	\$1,160	\$580	\$ _____
☐ Five months (37 CFR 1.17(a)(5))	\$3,160	\$1,580	\$790	\$ _____

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☐ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to
Deposit Account Number _____.

☒ Payment made via EFS-Web.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

☐ applicant.

☒ attorney or agent of record. Registration number 55757.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

<u>/HUGH MANSFIELD/</u> Signature	<u>2022-04-20</u> Date
<u>Hugh Mansfield</u> Typed or printed name	<u>514-397-5170</u> Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #
17/010,113

RECEIPT DATE / TIME
04/20/2022 11:30:18 AM ET

ATTORNEY DOCKET #
G13569-00485-HM

Title of Invention

MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 1019

FILED BY Regeline Jean Francois

PATENT CENTER # 60627512

AUTHORIZED BY Hugh Mansfield

CUSTOMER # 25545

FILING DATE 09/02/2020

CORRESPONDENCE ADDRESS -

FIRST NAMED INVENTOR VINCENT PILON

Payment Information

PAYMENT METHOD
CARD / 1007

PAYMENT TRANSACTION ID
E20224JB33274050

PAYMENT AUTHORIZED BY
Regeline Jean Francois

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
1251	EXTENSION FOR RESPONSE WITHIN FIRST MONTH	220.00	1	220.00
1801	REQUEST FOR CONTINUED EXAMINATION (RCE) - 1ST REQUEST (SEE 37 CFR 1.114)	1360.00	1	1360.00
TOTAL AMOUNT:				\$1,580.00

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New Applications Under 35 U.S.C. 111

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National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	BELDEN CANADA ULC	Customer Number:	25545
Docket No.:	G13569-00485—HM	Confirmation No.:	1019
Serial No.:	17/010,113	Group Art:	2874
Filing Date:	September 2, 2020	Examiner:	Rhonda S. Peace
Title:	MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD		

Mail Stop Amendment
Commissioner for Patents
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Alexandria, VA 22313-1450

RESPONSE TO FINAL OFFICE ACTION

Sir:

In response to the Final Office Action dated December 21, 2021 in connection with the above-identified patent application, please consider the following amendments and remarks. Response to the Final Office Action is due April 21, 2022 with a 1-Month Extension of Time.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 6 of this paper.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace prior versions and listings of claims in the application:

Claims have been amended as follows: Underlines indicate insertions and ~~strikethrough~~ indicate deletions.

Listing of claims:

1. (currently amended) A modular fiber optic cassette system, the system comprising:
a case comprising a top and a bottom wall and two opposed side walls, each of said sidewalls attached between respective side edges of said top and bottom wall, said walls together defining a tray receiving space there between and a forward edge of each said wall together defining an opening to said tray receiving space;
at least one tray slideably received within said tray receiving space for movement between a stored position wherein said tray is completely inside said tray receiving space and an accessible position wherein a front end of said tray is in front of said opening and outside of said tray receiving space;
a set of fiber optic cassettes, a selected plurality of the cassettes arrangeable side by side along said tray front end wherein each of said cassettes comprises a plurality of optic plug receiving receptacles arranged side by side in a row along a front thereof, a first of said set of cassettes comprising a first cassette width as measured between outer side edges thereof of one of one, two, three, four and six standard width units and a second of said cassettes comprising a second cassette width as measured between outer side edges thereof different from said first cassette width and one of one, two, three, four and six standard width units; and
a fastener for removeably securing each of said cassettes to said tray;
wherein when arranged on the tray an outer side edge of each of said selected cassettes is directly adjacent an outer side edge of at least one other selected cassette.

2. (original) The modular fiber optic cassette system of Claim 1, wherein said tray has a width dimensioned to receive at least twelve standard width units side by side.

3. (original) The modular fiber optic cassette system of Claim 1, wherein each of said cassettes comprises a multi fiber connector receiving receptacle arranged on a rear thereof and a plurality of optic fibers, one of said optic fibers interconnecting a respective one of said optic plug receiving receptacles with said multi fiber connector receiving receptacle.

4. (original) The modular fiber optic cassette system of Claim 1, wherein each of said cassettes comprises four fiber optic plug receiving receptacles arranged side by side in a row along a front thereof for each standard width unit.

5. (original) The modular fiber optic cassette system of Claim 1, wherein said system is for mounting in a rack and further comprising a pair of mounting brackets, one of said brackets attached to each of said sidewalls on either side of an outside of said case, said mounting brackets for securing said case to the rack.

6. (original) The modular fiber optic cassette system of Claim 1, wherein said tray is manufactured from a ferrous metal and said fastener comprises a magnet.

7. (original) The modular fiber optic cassette system of Claim 1, further comprising at least one elongate cable management bracket comprising a cable management loop and a fastener for removeably securing said at least one bracket to said tray, said bracket having a bracket width of one of said standard width units and further wherein when installed on said tray adjacent an installed one of said cassettes, said cable management loop is positioned in front of and to a side of said plurality of optic plug receiving receptacles of said installed cassette.

8. (currently amended) A method for organising a tray comprising a front edge in a fiber optic interconnect system, the method comprising:
defining a standard width unit wherein a width of the front edge is substantially evenly

divisible by said standard width unit;
selecting a plurality of cassettes for installation on the tray from a set of cassettes having
a plurality of different widths as measured between respective outer side edges
thereof, wherein each of said different widths is evenly divisible by said standard
width unit; and
releasably securing said selected cassettes along the front edge of the tray;
wherein when arranged on the tray an outer side edge of each of said selected cassettes
is directly adjacent an outer side edge of at least one other selected cassette.

9. (original) The method for organising a tray of Claim 9, wherein said set of cassettes
comprises cassettes comprising widths of one, two, three, four and six standard width units.

10. (original) The method for organising a tray of Claim 9, wherein said selected
cassettes all comprise the same width.

11. (original) The method for organising a tray of Claim 9, wherein said selected
cassettes comprise a first cassette having a first width and a second cassette having a second
width different from said first width.

12. (original) The method for organising a tray of Claim 9, wherein the width of the
front edge is substantially evenly divisible by a maximum of twelve (12) of said standard width
units.

13. (original) The method for organising a tray of Claim 12, wherein said selected
cassettes further comprise a third cassette comprising a third width different from said first width
and said second width.

REMARKS

Claims 1 to 13 remain in the case.

Claims 1 and 8 have been amended having regard to the Official Action. In particular, Claim 1 has been amended to claim a modular fiber optic cassette system comprising *inter alia* a first of a set of cassettes comprising a first cassette width as measured between outer side edges thereof of one of one, two, three, four and six standard width units and a second of the cassettes comprising a second cassette width as measured between outer side edges thereof different from the first cassette width and one of one, two, three, four and six standard width units and wherein when arranged on a tray an outer side edge of each of the cassettes is directly adjacent an outer side edge of at least one other cassette. A similar amendment has been introduced into Claim 8. Support for these amendments can be found, for example, in Figure 3 and the supporting text. at paragraph 15 of the specification as published.

REJECTION UNDER 35 U.S.C. § 102(a)(2)

Claims 1-5 and 8-13 have been rejected as being anticipated by Sedor et al. ("US 10,215,944") under 35 U.S.C. § 102. Applicants respectfully traverse the rejection as follows.

Claim 1 claims a modular fiber optic cassette system comprising *inter alia* a first set of cassettes comprising a first cassette width as measured between outer side edges thereof of one, two, three, four and six standard width units and a second cassette comprising a second cassette width as measured between outer side edges thereof different from said first cassette width and one of one, two, three, four and six standard width units.

Sedor et al. discloses a modular fiber optic tray comprising fiber optic modules which are configured to engage with rails. In particular with reference to Fig. 7, Fig. 9 and Fig. 11 Sedor et. al. discloses respectively two 12-optical fiber modules (30), three 8-optical fiber modules (40) and single 24-optical fiber module (20) all which fit in the same space of the tray. If the 8-optical

fiber modules (40) each are assigned a width “2U” as measured between the outer side edges thereof, then the overall width of the three 8-optical fiber modules and two rails (180) is 6U plus the width of the two rails. However, as clearly shown in the figures, the three 8-optical fiber modules and two rails occupy the same space as two 12-optical fiber modules (40) and a single rail (180). As such, it is clear that each of the two 12-optical fiber modules would not have a width 3U, as required in order to fall within the scope of Claim 1 as amended, but rather a width of 3U plus the width of ½ the rail.

Clearly, therefore, Sedor *et al.* fails to disclose a system where the cassettes have the dimensions of the those as now claimed at Claim 1 as amended.

In view of the above, Applicant submits that Claim 1 is not anticipated by Sedor *et al.* and therefore an allowable claim. A similar argument applies to Claim 8 which Applicant submits is also not anticipated by Sedor *et al.* and therefore is also an allowable claim.

REJECTION UNDER 35 U.S.C. § 103

Claim 6 has been rejected as being unpatentable over Sedor *et al.* and Nelson *et al.* (“US 4,792,203”). Similarly, Claim 7 has been rejected as being unpatentable over Sedor *et al.* and Giraud *et al.* (“US 2016/0062050”).

Nelson *et al.* discloses an optical fiber distribution apparatus comprising a plurality of stacked spools. Giraud *et al.* discloses a fiber optic equipment comprising a plurality of modules. Similar to Sedor *et al.*, the modules are mounted on a tray using features such as rails which are positioned between the modules.

Nelson *et al.* and Giraud *et al.* add nothing which addresses the limitations of the disclosure of Sedor *et al.*

Application No. 17/010,113
Amendment filed April 20, 2022
Final Office Action mailed December 21, 2021
BELDEN CANADA ULC *et al.*

Docket number: G13569-00485-HM

In view of the above, Applicant submits that neither Claim 6 nor Claim 7 are rendered obvious by Sedor et al, Nelson et al. and Giraud et al. taken either alone or in combination and therefore that Claims 6 and 7 are both allowable claims.

As the remaining claims all depend from an allowable claim, Applicant submits that they, too, are allowable claims.

The rejections of the original claims are believed to have been overcome by the present remarks and the introduction of new claims. From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such an action is earnestly solicited.

Respectfully submitted,

Date: April 20, 2022

/Hugh Mansfield/

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HM/mad



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APPLICATION #
17/010,113

RECEIPT DATE / TIME
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ATTORNEY DOCKET #
G13569-00485-HM

Title of Invention

MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 1019

FILED BY Regeline Jean Francois

PATENT CENTER # 60627512

FILING DATE 09/02/2020

CUSTOMER # 25545

FIRST NAMED INVENTOR VINCENT PILON

CORRESPONDENCE ADDRESS -

AUTHORIZED BY Hugh Mansfield

Documents

TOTAL DOCUMENTS: 5

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
2501-USPTO-AMENDMENT-Response to OA dated 211221.pdf	7	-	96 KB
2501-USPTO-AMENDMENT-Response to OA dated 211221-AMSB.pdf	(1-1) 1	Amendment Submitted/Entered with Filing of Continued Prosecution Application (CPA)/Request for Continued Examination(RCE)	65 KB
2501-USPTO-AMENDMENT-Response to OA dated 211221-CLM.pdf	(2-4) 3	Claims	84 KB
2501-USPTO-	(5-7) 3	Applicant Arguments/Remarks	84 KB

AMENDMENT-Response to OA dated 211221-REM.pdf		Made in an Amendment	
2501-USPTO-RCE.pdf	3	Request for Continued Examination (RCE)	1318 KB
2501-USPTO-Time Extension.pdf	2	Extension of Time	162 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
2501-USPTO-AMENDMENT- Response to OA dated 211221.pdf	2E2F384410A071171336EEB3C7F08D545FC6A893B0864D6EB1 010441411EB65BF0414D39267ACF95DDCC27A74A78243B1576 5B30DD1662284F146202823C114C
2501-USPTO-AMENDMENT- Response to OA dated 211221- AMSB.pdf	019802097E75C0EA5F6AD07C017F0C2B663A6410F9F3BB1809 90550FE46553C14347AFB9AEAE77793260AA013FA509AD930C FCC0CFE4A0EB7369D9BBBBA6DBE7
2501-USPTO-AMENDMENT- Response to OA dated 211221- CLM.pdf	01351FAE2EFF0365E3EBDBB3C9A5F38AB51064E735CA94778 F9EB6D957531B8525A062B1292D09FD04D18FE1C6FF8EFFAE 12D1A0727479008A37E5196486B848
2501-USPTO-AMENDMENT- Response to OA dated 211221- REM.pdf	6CCAE83ADDEB5C33F701441968641B47BDDFB87C2C109DD4 43413FBD2701B6E77E2402040DAE98A45CFA0967E01F3B8AC CF0E4D85C1FF3D260EB39A2CCA6ECEFF
2501-USPTO-RCE.pdf	E4FF42D82CD058B781A8D059F9FB736ED46385D717AAE4F6D 66231001C4EB588A70C1F9968C9CF8238FDC71A78B40055C3 D19623A061663E4D8A0AB4CAEF1916
2501-USPTO-Time Extension.pdf	A183C85BEC5A3F4B5D1C41C83CB193BF58925704CBB9D538 FCBFF4C12E9D7E7D063031D04252DA363B11B351F6A90C514 7503E1ADB358C00C29A5F41B5802AB1

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National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 17/010,113		Filing Date 09/02/2020		☐ To be Mailed			
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO											
APPLICATION AS FILED - PART I											
		(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A					
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))		N/A		N/A		N/A					
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A					
TOTAL CLAIMS (37 CFR 1.16(j))		minus 20 = *				x \$100 =					
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 = *				x \$460 =					
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))											
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL					
APPLICATION AS AMENDED - PART II											
		(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	04/20/2022	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(j))	* 13	Minus	** 20	= 0		x \$100 =		0		
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x \$480 =		0		
	☐ Application Size Fee (37 CFR 1.16(s))										
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
								TOTAL ADD'L FEE		0	
		(Column 1)		(Column 2)		(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(j))	*	Minus	**	=		x \$0 =				
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x \$0 =				
	☐ Application Size Fee (37 CFR 1.16(s))										
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
								TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.								LIE			
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NOTICE OF ALLOWANCE AND FEE(S) DUE

25545 7590 05/02/2022
Lavery, De Billy, LLP
1 Place Ville Marie, Suite 4000
Montreal, QUEBEC H3B 4M4
CANADA

EXAMINER

PEACE, RHONDA S

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 05/02/2022

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/010,113	09/02/2020	VINCENT PILON	G13569-00485-HM	1019

TITLE OF INVENTION: MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	08/02/2022

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

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If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

25545 7590 05/02/2022
Lavery, De Billy, LLP
1 Place Ville Marie, Suite 4000
Montreal, QUEBEC H3B 4M4
CANADA

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/010,113	09/02/2020	VINCENT PILON	G13569-00485-HM	1019

TITLE OF INVENTION: MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	08/02/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
PEACE, RHONDA S	2874	385-135000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/010,113	09/02/2020	VINCENT PILON	G13569-00485-HM	1019
25545	7590	05/02/2022	EXAMINER	
Lavery, De Billy, LLP 1 Place Ville Marie, Suite 4000 Montreal, QUEBEC H3B 4M4 CANADA			PEACE, RHONDA S	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 05/02/2022

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.** Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b) (2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 17/010,113	Applicant(s) PILON, VINCENT	
	Examiner R. PEACE	Art Unit 2874	AIA (FITF) Status Yes

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the RCE filed 4/20/22.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ 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.

3. ☒ The allowed claim(s) is/are 1-13 . As a result of the allowed claim(s), 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.

4. ☐ 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)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892) 2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____. 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____. 4. ☒ Interview Summary (PTO-413), Paper No./Mail Date: <u>20220422</u> .	5. ☒ Examiner's Amendment/Comment 6. ☒ Examiner's Statement of Reasons for Allowance 7. ☐ Other _____.
--	---

/RHONDA S PEACE/ Primary Examiner, Art Unit 2874	
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DETAILED ACTION

Notice of Pre-AIA or AIA Status

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

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 4/20/22 has been entered.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an interview with Hugh Mansfield (Reg. No. 55,757) on 4/22/22.

The application has been amended as follows:

9. The method for organising a tray of Claim 8-9, wherein said set of cassettes comprises cassettes comprising widths of one, two, three, four and six standard width units.
10. The method for organising a tray of Claim 8-9, wherein said selected cassettes all comprise the same width.

11. The method for organising a tray of Claim 8-9, wherein said selected cassettes comprise a first cassette having a first width and a second cassette having a second width different from said first width.
12. The method for organising a tray of Claim 8-9, wherein the width of the front edge is substantially evenly divisible by a maximum of twelve (12) of said standard width units.
13. The method for organising a tray of Claim 11-12, wherein said selected cassettes further comprise a third cassette comprising a third width different from said first width and said second width.

Allowable Subject Matter

Claims 1-13 allowed.

The following is an examiner's statement of reasons for allowance:

Re. Claims 1-7, the prior art does not disclose or reasonably suggest a modular fiber optic cassette system, the system comprising a set of fiber optic cassettes, a selected plurality of the cassettes arrangeable side by side along said tray front end wherein each of said cassettes comprises a plurality of optic plug receiving receptacles arranged side by side in a row along a front thereof, a first of said set of cassettes comprising a first cassette width *as measured between outer side edges thereof* of one, two, three, four and six standard width units and a second of said cassettes comprising a second cassette width *as measured between outer side edges thereof* different from said first cassette width and one of one, two, three, four and six standard width units, wherein when arranged on the tray *an outer side edge of each of said selected cassettes is directly adjacent an outer side edge at least one other selected cassette*, in combination with the remaining limitations of the claims.

Re. Claims 8-13, the prior art does not disclose or reasonably suggest a method for organising a tray comprising a front edge in a fiber optic interconnect system, the

method comprising selecting a plurality of cassettes for installation on the tray from a set of cassettes having a plurality of different widths *as measured between respective outer side edges thereof*, wherein when arranged on the tray *an outer side edge of each of said selected cassettes is directly adjacent an outer side edge of least one other selected cassette*, in combination with the remaining limitations of the claims.

The most applicable prior art, Sedor et al. (US 10,215,944 B2), addressed in the Office Action mailed 12/21/21, fails to disclose or reasonably suggest the claimed invention, specifically those portions *highlighted* above in combination with the remaining limitations of the claims. When widths are measured from the outer side edges of the cassettes, Sedor et al. fails to disclose cassettes having the sizes required by the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. PEACE whose telephone number is (571)272-8580. The examiner can normally be reached 9-5 pm.

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, Uyen-Chau Le can be reached on (571) 272-2397. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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.

/RHONDA S PEACE/
Primary Examiner, Art Unit 2874
4/22/22

<i>Examiner-Initiated Interview Summary</i>	Application No. 17/010,113	Applicant(s) PILON, VINCENT		
	Examiner R. PEACE	Art Unit 2874	AIA (First Inventor to File) Status Yes	Page 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	Title	Type
R. PEACE	Primary Examiner	Telephonic
Hugh Mansfield (Reg. No. 55,757)	Attorney	

Date of Interview: 22 April 2022

Issues Discussed:

Other

Applicant approved an examiner's amendment to correct the dependency of claims 9-13.

/RHONDA S PEACE/ Primary Examiner, Art Unit 2874	
Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04 Please further see: MPEP 713.04 Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b) 37 CFR § 1.2 Business to be transacted in writing	

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

<i>Notice of References Cited</i>	Application/Control No. 17/010,113		Applicant(s)/Patent Under Reexamination PILON, VINCENT	
	Examiner R. PEACE		Art Unit 2874	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-11187864-B2	11-2021	Crawford; Dwayne	G02B6/447	1/1
*	B	US-10795107-B2	10-2020	Pilon; Vincent	G02B6/46	1/1
*	C	US-10768387-B2	09-2020	Pilon; Vincent	G02B6/4455	1/1
*	D	US-10656359-B2	05-2020	Fontaine; Marc	G02B6/3825	1/1
*	E	US-10598884-B2	03-2020	Fontaine; Marc	G02B6/4455	1/1
*	F	US-10359595-B2	07-2019	Aramayo; Aldo Loayza	G02B6/4455	1/1
*	G	US-9690064-B2	06-2017	Sauter; Tom	G02B6/4455	1/1
*	H	US-20020131730-A1	09-2002	Keeble, Daniel John	G02B6/4246	385/88
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office
PTO-892 (Rev. 01-2001)

Notice of References Cited

Part of Paper No. 20220422

Issue Classification 	Application/Control No. 17/010,113	Applicant(s)/Patent Under Reexamination PILON, VINCENT
	Examiner R. PEACE	Art Unit 2874

CPC						
Symbol					Type	Version
G02B	/	6	/	4455	F	2013-01-01
G02B	/	6	/	46	I	2013-01-01

CPC Combination Sets						
Symbol			Type	Set	Ranking	Version
	/		/			

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	13	
/RHONDA S PEACE/ Primary Examiner, Art Unit 2874	22 April 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office

Part of Paper No.: 20220422

Issue Classification 	Application/Control No. 17/010,113	Applicant(s)/Patent Under Reexamination PILON, VINCENT
	Examiner R. PEACE	Art Unit 2874

INTERNATIONAL CLASSIFICATION			
CLAIMED			
G02B6/44	/	6	44
NON-CLAIMED			
G02B6/46	/	6	46

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	13	
/RHONDA S PEACE/ Primary Examiner, Art Unit 2874	22 April 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office

Part of Paper No.: 20220422

Issue Classification 	Application/Control No. 17/010,113	Applicant(s)/Patent Under Reexamination PILON, VINCENT
	Examiner R. PEACE	Art Unit 2874

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	10	10												
2	2	11	11												
3	3	13	12												
4	4	12	13												
5	5														
6	6														
7	7														
8	8														
9	9														

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 13	
/RHONDA S PEACE/ Primary Examiner, Art Unit 2874 (Primary Examiner) _____ (Date) _____		O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office

Part of Paper No.: 20220422

Search Notes 	Application/Control No. 17/010,113	Applicant(s)/Patent Under Reexamination PILON, VINCENT
	Examiner R. PEACE	Art Unit 2874

CPC - Searched*		
Symbol	Date	Examiner

CPC Combination Sets - Searched*		
Symbol	Date	Examiner
G02B 6/4455 (with text limiting)	04/22/2022	RSP

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
inventor search	09/07/2021	RSP
global dossier search	09/07/2021	RSP
see attached SEARCH history notes	09/07/2021	RSP
see attached SEARCH history notes	12/16/2021	RSP
see attached SEARCH history notes	04/22/2022	RSP

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	interference search (USPAT and USPGPub databases)	04/22/2022	RSP

/RHONDA S PEACE/ Primary Examiner, Art Unit 2874	
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Bibliographic Data

Application No: 17/010,113

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No

☐ Met After Allowance

Verified and Acknowledged: /RHONDA S PEACE/

Examiner's Signature

Initials

Title:

MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
09/02/2020	385	2874	G13569-00485-HM
RULE			

APPLICANTS

BELDEN CANADA ULC, SAINT-LAURENT, CANADA

INVENTORS

VINCENT PILON, LACHINE, CANADA

CONTINUING DATA

This application is a CON of 16143831 09/27/2018 PAT 10795107

16143831 has PRO of 62567339 10/03/2017

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

09/11/2020

STATE OR COUNTRY

CANADA

ADDRESS

Lavery, De Billy, LLP

1 Place Ville Marie, Suite 4000

Montreal, QC H3B 4M4

CANADA

FILING FEE RECEIVED

\$1,720

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
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L17	5	L16 and magnet\$4	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2019/12/17 03:54 PM
L18	1494	G02B6/\$.cpc. and (magnet\$5 same (cassette or module))	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2019/12/17 03:56 PM
L19	70	G02B6/4453-4455.cpc.	(US-PGPUB; USPAT;	OR	ON	ON	2019/12/17

		and (magnet\$5)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)				04:36 PM
L20	26	(US-20160062050-\$ or US-20160062055-\$ or US-20160062058-\$ or US-20160062068-\$ or US-20170192191-\$ or US-20180003912-\$ or US-20180100976-\$ or US-20190004268-\$ or US-20190101717-\$ or US-20090290842-\$ or US-20160033732-\$ or US-20020131730-\$ or US-20070131628-\$).did. or (US- 10215944-\$ or US- 10254497-\$ or US- 9841574-\$ or US- 4792203-\$ or US- 8554044-\$ or US- 4840449-\$ or US- 8913866-\$ or US- 7509015-\$ or US- 9075216-\$ or US- 9008485-\$ or US- 7331722-\$ or US- 10281672-\$).did. or (EP-3404461-\$).did.	(US-PGPUB; USPAT; FPRS)	OR	ON	ON	2019/12/17 04:45 PM
L21	6	(US-20090290842-\$ or US-20160062050-\$ or US-20190004268-\$ or US-20190101717-\$).did. or (US- 10215944-\$ or US- 4792203-\$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2019/12/17 04:45 PM
L22	20	L20 not L21	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2019/12/17 04:46 PM
L24	1	("2019/0101717").URP N.	(USPAT)	OR	ON	ON	2020/05/18 10:11 AM
L25	35	("20020150370" "20050237721" "20110274402" "20130188919" "20150219866" "20170269324" "20190101717" "20190107682" "4595255" "4752110" "4884863" "4971421" "5208894" "5519804" "5546495" "5737475" "5825962" "5835657"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2020/05/18 10:12 AM

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L26	77	("20030223723" "4900123" "5915802" "6282360" "6356697" "6758600" "6869227" "6925241" "7205481" "7333706").PN. OR ("7509015").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2020/05/18 10:18 AM
L27	8985	G02B6/4453-4455.cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2020/05/18 10:24 AM
L28	674	L27 and modular	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2020/05/18 10:27 AM
L29	82	L27 and (((dissimilar or differ\$4 or varying or various or variable) near4 (size or footprint or width)) same (module or cassette))	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2020/05/18 10:37 AM
L30	2	("20190187394" "9223094").PN. OR ("10514518").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2020/05/18 10:39 AM
L31	29	(US-20160062050-\$ or US-20160062055-\$ or US-20160062058-\$ or US-20160062068-\$ or US-20170192191-\$ or US-20180003912-\$ or US-20180100976-\$ or US-20190004268-\$ or US-20190101717-\$ or US-20090290842-\$ or US-20160033732-\$ or US-20020131730-\$ or US-20070131628-\$ or US-20190107682-\$ or US-20190187394- \$).did. or (US- 10215944-\$ or US- 10254497-\$ or US- 9841574-\$ or US- 4792203-\$ or US- 8554044-\$ or US-	(US-PGPUB; USPAT; FPRS)	OR	ON	ON	2020/05/18 10:43 AM

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L32	6	(US-20090290842-\$ or US-20160062050-\$ or US-20190004268-\$ or US-20190101717-\$).did. or (US-10215944-\$ or US-4792203-\$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2020/05/18 10:43 AM
L33	9	(US-20020131730-\$ or US-20070131628-\$ or US-20160033732-\$).did. or (US-10281672-\$ or US-7331722-\$ or US-7509015-\$ or US-8913866-\$ or US-9008485-\$ or US-9075216-\$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2020/05/18 10:43 AM
L34	14	L31 not (L32 or L33)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2020/05/18 10:44 AM
L35	19	("10215944" OR "10281672" OR "10514518" OR "20070131628" OR "20090290842" OR "20160033732" OR "20160062050" OR "20190004268" OR "20190101717" OR "20190107682" OR "20190162924" OR "20190187394" OR "20200131730" OR "4792203" OR "7331722" OR "7509015" OR "8913866" OR "9008485" OR "9075216").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2021/09/07 02:14 PM
L36	27	((("PILON") near3 ("VINCENT"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2021/09/07 03:33 PM
L37	30	((EP-3404461-A1).did. AND FPRS.dbnm.) OR ((US-20160062050-A1	(USPAT; US-PGPUB; FPRS; USOCR; IBM_TDB; EPO; JPO;	OR	ON	ON	2021/09/07 03:50 PM

		OR US-20160062055-A1 OR US-20160062058-A1 OR US-20160062068-A1 OR US-20170192191-A1 OR US-20180003912-A1 OR US-20180100976-A1 OR US-20190004268-A1 OR US-20190101717-A1 OR US-20090290842-A1 OR US-20160033732-A1 OR US-20020131730-A1 OR US-20070131628-A1 OR US-20190107682-A1 OR US-20190187394-A1 OR US-20190162924-A1).did. AND PGPB.dbnm.) OR ((US-10215944-B2 OR US-10254497-B2 OR US-9841574-B1 OR US-4792203-A OR US-8554044-B2 OR US-4840449-A OR US-8913866-B2 OR US-7509015-B2 OR US-9075216-B2 OR US-9008485-B2 OR US-7331722-B2 OR US-10281672-B1 OR US-10514518-B1).did. AND USPT.dbnm.)	DERWENT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))				
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		20190187394-A1 OR US-20190162924-A1).did. AND PGPB.dbnm.) OR ((US-10215944-B2 OR US-10254497-B2 OR US-9841574-B1 OR US-4792203-A OR US-8554044-B2 OR US-4840449-A OR US-8913866-B2 OR US-7509015-B2 OR US-9075216-B2 OR US-9008485-B2 OR US-7331722-B2 OR US-10281672-B1 OR US-10514518-B1).did. AND USPT.dbnm.)					
L39	11	L38 NOT L35	(US-PGPUB; USPAT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO))	OR	ON	ON	2021/09/07 03:51 PM
L40	2	"6208593".pn.	(US-PGPUB; USPAT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO))	OR	ON	ON	2021/12/16 02:15 PM
L41	15	"2030171"	(US-PGPUB; USPAT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO))	OR	ON	ON	2021/12/16 02:16 PM
L42	30	((EP-3404461-A1).did. AND FPRS.dbnm.) OR ((US-20160062050-A1 OR US-20160062055-A1 OR US-20160062058-A1 OR US-20160062068-A1 OR US-20170192191-A1 OR US-20180003912-A1 OR US-20180100976-A1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO)); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2021/12/16 02:29 PM

		OR US-20190004268-A1 OR US-20190101717-A1 OR US-20090290842-A1 OR US-20160033732-A1 OR US-20020131730-A1 OR US-20070131628-A1 OR US-20190107682-A1 OR US-20190187394-A1 OR US-20190162924-A1).did. AND PGPB.dbnm.) OR ((US-10215944-B2 OR US-10254497-B2 OR US-9841574-B1 OR US-4792203-A OR US-8554044-B2 OR US-4840449-A OR US-8913866-B2 OR US-7509015-B2 OR US-9075216-B2 OR US-9008485-B2 OR US-7331722-B2 OR US-10281672-B1 OR US-10514518-B1).did. AND USPT.dbnm.)					
L43	32	(Artificial Intelligence) More Like: US-10215944-B2 Text: (US-9075216-B2 OR US-20110268404-A1 OR JP-2019525225-A OR TW-I708084-B OR CN-109416449-B OR TW-201812364-A OR EP-3479153-A1 OR WO-2018005222-A1 OR US-20180003912-A1 OR CN-109416449-A OR US-10795107-B2 OR CA-3019081-A1 OR US-20190101717-A1 OR US-20200400908-A1 OR JP-2017531205-A OR TW-202115446-A OR US-20200341223-A1 OR EP-3671301-A1 OR US-20160299308-A1 OR CN-112612091-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/02/25 11:49 AM
L44	35	(Artificial Intelligence) More Like: US-20200400908-A1 Text:	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2022/02/25 11:50 AM

		(US-20190219786-A1 OR CA-3030399-A1 OR US-20180011275-A1 OR US-10185108-B2 OR CA-2972850-A1 OR CN-109416449-A OR US-20210109304-A1 OR US-11036020-B2 OR EP-1185897-B1 OR US-10795107-B2 OR US-20210072482-A1 OR CA-3019081-A1 OR US-20190101717-A1 OR TW-I708084-B OR TW-201812364-A OR JP-2019525225-A OR CN-109416449-B OR US-20200310064-A1 OR US-10866378-B2 OR US-11187864-B2).did.	CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L45	28	(Artificial Intelligence) More Like: US-10215944-B2 Text: (US-9075216-B2 OR US-20110268404-A1 OR JP-2019525225-A OR TW-463066-B OR TW-I708084-B OR JP-7033090-B2 OR TW-201812364-A OR CN-109416449-B OR CN-109416449-A OR EP-3479153-A1 OR WO-2018005222-A1 OR US-20180003912-A1 OR US-10795107-B2 OR CA-3019081-A1 OR US-20190101717-A1 OR US-20200400908-A1 OR JP-2017531205-A OR TW-I755857-B OR TW-202115446-A OR US-20200341223-A1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/04/22 01:28 PM
L46	39	(Artificial Intelligence) More Like: US-20200400908-A1 Text: (EP-2277071-A2 OR US-20190219786-A1 OR CN-102844693-A OR CA-3030399-A1 OR US-10185108-B2 OR US-20210109304-A1 OR US-11036020-B2	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO,	OR	ON	ON	2022/04/22 01:29 PM

		OR EP-1185897-B1 OR US-20210072482-A1 OR US-10795107-B2 OR CA-3019081-A1 OR US-20190101717-A1 OR CN-102844693-B OR US-11249269-B2 OR US-20200257071-A1 OR US-20200310064-A1 OR US-10866378-B2 OR US-6504986-B1 OR US-11187864-B2 OR US-20220057590-A1).did.	RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L47	2607	G02B6/4455.cpc.	(US-PGPUB; USPAT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO))	OR	ON	ON	2022/04/22 01:34 PM
L48	830	L47 AND (tray WITH (module OR cassette))	(US-PGPUB; USPAT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO))	OR	ON	ON	2022/04/22 01:35 PM
L49	38	((US-20190162924-A1 OR US-20160062050-A1 OR US-20160062055-A1 OR US-20160062058-A1 OR US-20160062068-A1 OR US-20170192191-A1 OR US-20180003912-A1 OR US-20180100976-A1 OR US-20190004268-A1 OR US-20190101717-A1 OR US-20090290842-A1 OR US-20160033732-A1 OR US-20190187394-A1 OR US-20190107682-A1 OR US-20070131628-A1 OR US-20020131730-A1).did. AND PGPB.dbnm.) OR ((US-10215944-B2 OR US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO)); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/04/22 03:56 PM

		10254497-B2 OR US-9841574-B1 OR US-4792203-A OR US-8554044-B2 OR US-10514518-B1 OR US-10281672-B1 OR US-7331722-B2 OR US-9008485-B2 OR US-9075216-B2 OR US-7509015-B2 OR US-8913866-B2 OR US-4840449-A OR US-11187864-B2 OR US-10795107-B2 OR US-10768387-B2 OR US-10598884-B2 OR US-10656359-B2 OR US-10359595-B2 OR US-9690064-B2).did. AND USPT.dbnm.) OR ((EP-3404461-A1).did. AND FPRS.dbnm.) OR ((US-20200400908-A1).did. AND DWPI.dbnm.)					
L50	19	("10215944" OR "10281672" OR "10514518" OR "20070131628" OR "20090290842" OR "20160033732" OR "20160062050" OR "20190004268" OR "20190101717" OR "20190107682" OR "20190162924" OR "20190187394" OR "20200131730" OR "4792203" OR "7331722" OR "7509015" OR "8913866" OR "9008485" OR "9075216").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/22 03:56 PM
L51	18	L49 NOT L50	(US-PGPUB; USPAT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO))	OR	ON	ON	2022/04/22 03:56 PM
L52	16	L51 NOT (((US-20160062068-A1 OR US-20180003912-A1).did AND PGPB.dbnm))	(US-PGPUB; USPAT; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP,	OR	ON	ON	2022/04/22 03:57 PM

			ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO))				
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PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N23	72	((cassette or module) and metal\$4 and optic\$4 and (fiber or fibre) and magnet\$4 and (tray or housing or drawer or slide)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2019/12/17 04:33 PM
N35	3	(tray and cassette and (fiber or fibre) and optic\$4 and standard and width and (fasten\$4 or lock\$4 or secur\$4 or attach\$4 or fix\$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2020/05/18 10:48 AM
N36	7	(tray and cassette and (fiber or fibre) and optic\$4 and width and (fasten\$4 or lock\$4 or secur\$4 or attach\$4 or fix\$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2020/05/18 10:49 AM
N37	104	((fiber OR fibre) AND optic\$4 AND (cassette OR module) AND tray AND slid\$7 AND (receptacle OR adapter OR plug) AND (fasten\$4 OR attach\$4 OR fix\$4 OR position\$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/22 03:17 PM
N38	21	(method AND tray AND (fiber OR fibre) AND optic\$4 AND (module OR cassette) AND width).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/22 03:53 PM

FEE ADDRESS INDICATION FORM			
Application Number	17010113	Art Unit	2874
Filing Date	02-Sep-2020	Examiner Name	RHONDA PEACE
First Name Inventor	VINCENT PILON	Attorney Doc. Number	G13569-00485-HM
INSTRUCTIONS: In order for the fee address identified on this form to be effective, the issue fee must have been paid for the application listed on this form. Only an address represented by a customer number can be established as the fee address for maintenance fee purposes (hereafter, fee address). A fee address should be established when correspondence related to maintenance fees should be mailed to a different address than the correspondence address for the application. For more information on customer numbers, see the Manual of Patent Examining Procedure (MPEP) § 403.			
Please recognize as the Fee Address under the provisions of 37 CFR 1.363 the address associated with:			
Customer Number:		25545 Lavery, De Billy, LLP 1 Place Ville Marie, Suite 4000 Montreal QC H3B 4M4 CANADA 514-871-1522 uspto@lavery.ca	

Signature :

<i>I certify, in accordance with 37 CFR 1.4(d)(4) that I am an attorney or agent registered to practice before the Patent and Trademark Office who has filed and has been granted power of attorney in this application.</i>			
Signature	/HUGH MANSFIELD/	Date	08-01-2022
Name	Hugh Mansfield	Registration Number	55757

Electronic Patent Application Fee Transmittal				
Application Number:		17010113		
Filing Date:		02-Sep-2020		
Title of Invention:		MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD		
First Named Inventor/Applicant Name:		VINCENT PILON		
Filer:		Hugh Mansfield/Regeline Jean Francois		
Attorney Docket Number:		G13569-00485-HM		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY APPL ISSUE FEE	1501	1	1200	1200
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1200

Electronic Acknowledgement Receipt	
EFS ID:	46315400
Application Number:	17010113
International Application Number:	
Confirmation Number:	1019
Title of Invention:	MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD
First Named Inventor/Applicant Name:	VINCENT PILON
Customer Number:	25545
Filer:	Hugh Mansfield/Regeline Jean Francois
Filer Authorized By:	Hugh Mansfield
Attorney Docket Number:	G13569-00485-HM
Receipt Date:	01-AUG-2022
Filing Date:	02-SEP-2020
Time Stamp:	15:48:47
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$1200
RAM confirmation Number	E202281F48432424
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	Web85b.pdf	62716	no	2
			a49f0b85b40ec4e42717b1b0db2def46c33e91fb81		
Warnings:					
Information:					
2	Maintenance Fee Address Change	web85feeaddress.pdf	42484	no	1
			8e5363fb38c0ab8b5a4be939729aacddc8031276		
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	40363	no	2
			53cdb2a28ce8c6039cd72e92f77931f711c1dc2		
Warnings:					
Information:					
Total Files Size (in bytes):			145563		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Document Description: Issue Fee Payment (PTO-85B)

Issue Fee Transmittal Form

Application Number	Filing Date	First Named Inventor	Atty. Docket No.	Confirmation No.
17010113	02-Sep-2020	VINCENT PILON	G13569-00485-HM	1019

TITLE OF INVENTION :

MODULAR FIBER OPTIC CASSETTE, SYSTEM AND METHOD

Entity Status	Application Type	Art Unit	Class - Subclass	EXAMINER
Regular Undiscounted	Utility under 35 USC 111(a)	2874	135000	RHONDA PEACE
Issue Fee Due	Publication Due	Total Fee(s) Due	Date Due	Prev. Paid Fee
\$1200	\$0	\$1200	02-Aug-2022	\$0

1.Change of Correspondence Address and/or Indication Of Fee Address (37 CFR 1.33 & 1.363)

Current Correspondence Address:	Current Indicated Fee Address :
25545 Lavery, De Billy, LLP 1 Place Ville Marie, Suite 4000 Montreal QC H3B 4M4 CANADA 514-397-5119 ~~uspto@lavery.ca~~	
☐ Change of correspondence address requested, system generated AIA/122-EFS form attached	☒ Fee Address indication requested, system generated SB/47-EFS form attached

2.Entity Status**Change in Entity Status**

Applicant certifying micro entity status; system generated Micro Entity certification form attached. See 37 CFR 1.29.

Note: Absent a valid certification of micro entity status, issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

☐ If this box is checked, you will be prompted to choose a micro entity status on the gross income basis (37 CFR 1.29(a)) or the institution of higher education basis (37 CFR 1.29(d)), and make the applicable certification online.

☐ Applicant asserting small entity status. See 37 CFR 1.27.

Note: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

☒ Applicant changing to regular undiscounted fee status.

Note: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

WEB IFEE 1.0

Document Description: Issue Fee Payment (PTO-85B)

3.The Following Fee(s) Are Submitted:☒ Issue Fee☐ I authorize USPTO to apply my previously paid issue fee to the current fees due☐ Publication Fee☐ The Director is hereby authorized to apply my previously paid issue fee to the current fee due and to charge deficient fees to Deposit Account Number _____☐ Advance Order - # of copies _____☐ If **in addition to** the payment of the issue fee amount submitted with this form, there are any discrepancies in any amount(s) due, the Director is authorized to charge any deficiency, or credit any overpayment, to Deposit Account Number _____.
The **issue fee must be submitted** with this form. **If payment of the issue fee does not accompany this form, checking this box and providing a deposit account number will NOT be effective to satisfy full payment of the fee(s) due.****4.Firm and/or Attorney Names To Be Printed****NOTE: If no name is listed, no name will be printed**

For printing on the patent front page, list to be displayed as entered

1. LAVERY, DE BILLY, LLP

2. HUGH MANSFIELD

3.

5.Assignee Name(s) and Residence Data To Be Printed

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

Name	City	State	Country	Category
BELDEN CANADA ULC			CANADA	corporation

6.Signature

I certify, in accordance with 37 CFR 1.4(d)(4) that I am an attorney or agent registered to practice before the Patent and Trademark Office who has filed and has been granted power of attorney in this application. I also certify that this Fee(s) Transmittal form is being transmitted to the USPTO via EFS-WEB on the date indicated below.

Signature	/HUGH MANSFIELD/	Date	08-01-2022
Name	Hugh Mansfield	Registration Number	55757

WEB IFEE 1.0



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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/010,113	09/06/2022	11435542	G13569-00485-HM	1019

25545 7590 08/17/2022
Lavery, De Billy, LLP
1 Place Ville Marie, Suite 4000
Montreal, QUEBEC H3B 4M4
CANADA

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional inventors):

VINCENT PILON, LACHINE, CANADA;

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

BELDEN CANADA ULC, SAINT-LAURENT, CANADA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

IR103 (Rev. 10/09)