

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 11,260,624 B2
APPLICATION NO. : 16/835018
DATED : March 1, 2022
INVENTOR(S) : Christensen et al.

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page

Item (30) Foreign Application Priority Data:
Delete "Dec. 29, 2016 (EP) 15202962" and
Insert --Dec. 29, 2015 (EP) 15202962.5--

Signed and Sealed this
Twenty-eighth Day of June, 2022

Katherine Kelly Vidal
Director of the United States Patent and Trademark Office



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/835,018	03/30/2020	Lars Christensen	P006DK.WO.US.01 (87942.00)	7472
26582	7590	06/10/2022	EXAMINER	
Holland & Hart LLP			TISCHLER, FRANCES	
PO Box 11583				
Salt Lake City, UT 84147				
			ART UNIT	PAPER NUMBER
			1765	
			NOTIFICATION DATE	DELIVERY MODE
			06/10/2022	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):

patentdocket@hollandhart.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Patent No.: 11260624
Issue Date: 03/01/2022
Appl. No.: 16/835,018
Filed: 03/30/2020

PART (A) RESPONSE FOR CERTIFICATES OF CORRECTION

This is a decision on the Certificate of Correction request filed 03 June 2022.

The request for issuance of Certificate of Correction for the above-identified correction(s) under the provisions of 37 CFR 1.322 and/or 1.323 is hereby:

(Check one)

☒ Approved ☐ Approved in Part ☐ Denied

Comments: _____

PART (B) PETITION UNDER 37 CFR 1.324 OR 37 CFR 1.48

☐ This is a decision on the petition filed _____ to correct inventorship under 37 CFR 1.324.

☐ This is a decision on the request under 37 CFR 1.48, petition filed _____. In view of the fact that the patent has already issued, the request under 37 CFR 1.48 has been treated as a petition to correct inventorship under 37 CFR 1.324.

The petition is hereby: ☐ Granted ☐ Dismissed

Comment: _____

The patented filed is being forwarded to Certificate of Corrections Branch for issuance of a certificate naming only the actual inventor or inventors.

/LING SIU CHOI/
Supervisory Patent Examiner, Art Unit 1763
Technology Center 1700
Phone: (571)272-1098

Certificates of Correction Branch email: CustomerServiceCoC@uspto.gov CoC Central Phone Number: (703) 756-1814

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**Page 1 of 1

PATENT NO. : 11,260,624
APPLICATION NO.: 16/835,018
ISSUE DATE : March 1, 2022
INVENTOR(S) : Christensen et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the patent face, at section (30) Foreign Application Priority Data:
delete "Dec. 29, 2016 (EP) 15202962 and
insert --Dec. 29, 2015 (EP) 15202962.5--.

MAILING ADDRESS OF SENDER (Please do not use Customer Number below):

Steven A. Avena
Holland & Hart LLP
P.O. Box 11583, Salt Lake City, UT 84147

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. 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 1.0 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: Attention Certificate of Corrections Branch, 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.

Electronic Acknowledgement Receipt

EFS ID:	45871869
Application Number:	16835018
International Application Number:	
Confirmation Number:	7472
Title of Invention:	METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM
First Named Inventor/Applicant Name:	Lars Christensen
Customer Number:	26582
Filer:	Steven Anthony Avena/Wendy Nishida
Filer Authorized By:	Steven Anthony Avena
Attorney Docket Number:	P006DK.WO.US.01 (87942.00
Receipt Date:	03-JUN-2022
Filing Date:	30-MAR-2020
Time Stamp:	15:04:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		P006Danapak.pdf	181402	yes	3
			465cfca1414043207c3391a7b6c56179cf9e c24f		

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Transmittal Letter	1	2
	Request for Certificate of Correction	3	3
Warnings:			
Information:			
Total Files Size (in bytes):		181402	
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.			

I hereby certify that this correspondence is being mailed via
U.S. Postal Service to the United States Patent and Trademark Office
on June 3, 2022

HOLLAND & HART LLP

By: /Wendy Nishida/
Wendy Nishida

PATENT
Attorney Docket No.: P006DK.WO.US.01
(87942.0014)
Client Ref. No.: AWA#139515

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Christensen et al.

Application No.: 16/835,018

Filed: March 30, 2022

For: A METHOD FOR PROVIDING AN
EXTREME CHEMICAL RESISTANT
FILM, A FILM AND LAMINATE
OBTAINABLE THEREFROM

Customer No.: 26582

Confirmation No.: 7472

Examiner: Frances Tischler

Art Unit: 1765

**REQUEST FOR CERTIFICATE OF
CORRECTION OF OFFICE'S
MISTAKE (37 CFR 1.322)**

Attention Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

The assignee of the above-identified patent hereby requests that a Certificate of Correction be issued by the U.S. Patent and Trademark Office to correct the errors that are attributable to the Office and identified on the enclosed Form PTO/SB/44. Applicant notes that the issued patent (US Pat. No.: 11,260,624 B2) incorrectly states the foreign application priority data, which is different than the foreign application priority data provided in the ADS filed March 30, 2020. Specifically, the ADS provides correctly states the following foreign priority information (15202962.5 – EP – 2015-12-29), while the issued patent provides the following incorrect priority information (15202962 – EP – 2016-12-29).

Applicant believes that no fee is required for submission of this statement. However, if a fee is required, the Commissioner is authorized to deduct such a fee from the

Patent No. 11,260,624 B2
Application No. 16/835,018
Attorney Ref. No.: P006DK.WO.US.01 (87942.0014)
Request dated June 3, 2022

PATENT

undersigned's Deposit Account No. 08-2623. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

/Steven A. Avena/

Steven A. Avena
Reg. No. 75,211

HOLLAND & HART LLP
P.O. Box 11583
Salt Lake City, Utah 84147
Tel: 303-473-2700
Fax: 801-799-5700



APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/835,018	03/01/2022	11260624	P006DK.WO.US.01 (87942.00	7472

26582 7590 02/09/2022

Holland & Hart LLP
PO Box 11583
Salt Lake City, UT 84147

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 Data Management (ODM) at (571)-272-4200.

INVENTOR(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional inventors):

Lars Christensen, Slagelse, DENMARK;
Peter Johansen, Odense C, DENMARK;
Torben Fogtmann, Nyborg, DENMARK;

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Danapak Flexibles A/S, Slagelse, DENMARK;

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.

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)

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.

26582 7590 01/12/2022
Holland & Hart LLP
PO Box 11583
Salt Lake City, UT 84147

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.

Wendy Nishida/	(Typed or printed name)
/Wendy Nishida/	(Signature)
January 14, 2022	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/835.018	03/30/2020	Lars Christensen	P006DK.WO.US.01 (87942.00)	7472

TITLE OF INVENTION: METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM

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	04/12/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
TISCHLER, FRANCES	1765	427-356000

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 **Holland & Hart LLP**
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)

Danapak Flexibles A/S

SLAGELSE, DENMARK

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. **08-2623**

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 **/Paul M. Schramm/**

Date **January 14, 2022**

Typed or printed name **Paul M. Schramm**

Registration No. **62,050**

Electronic Patent Application Fee Transmittal

Application Number:	16835018			
Filing Date:	30-Mar-2020			
Title of Invention:	METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM			
First Named Inventor/Applicant Name:	Lars Christensen			
Filer:	Paul M. Schramm/Wendy Nishida			
Attorney Docket Number:	P006DK.WO.US.01 (87942.00)			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	1200	1200

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1200

Electronic Acknowledgement Receipt

EFS ID:	44750337
Application Number:	16835018
International Application Number:	
Confirmation Number:	7472
Title of Invention:	METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM
First Named Inventor/Applicant Name:	Lars Christensen
Customer Number:	26582
Filer:	Paul M. Schramm/Wendy Nishida
Filer Authorized By:	Paul M. Schramm
Attorney Docket Number:	P006DK.WO.US.01 (87942.00
Receipt Date:	14-JAN-2022
Filing Date:	30-MAR-2020
Time Stamp:	15:44:21
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 1200
RAM confirmation Number	E20221DF44453425
Deposit Account	082623
Authorized User	Wendy Nishida

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

137175

013

37 CFR 1.19 (Document supply fees)
 37 CFR 1.20 (Post Issuance fees)
 37 CFR 1.21 (Miscellaneous fees and charges)

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)	P006Danapak.pdf	154791	no	1
			c527689b0f2bd045f22b714c7567d98c9e2 aaeae		

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	38357	no	2
			8cb3f044eded719f184c9c60425fda86aaab 5c1c		

Warnings:

Information:

Total Files Size (in bytes):	193148
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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 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.

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.



UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

26582 7590 01/12/2022
Holland & Hart LLP
PO Box 11583
Salt Lake City, UT 84147

EXAMINER	
TISCHLER, FRANCES	
ART UNIT	PAPER NUMBER
1765	

DATE MAILED: 01/12/2022

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/835,018	03/30/2020	Lars Christensen	P006DK.WO.US.01 (87942.00)	7472

TITLE OF INVENTION: METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM

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	04/12/2022

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.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

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)

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.

26582 7590 01/12/2022
Holland & Hart LLP
PO Box 11583
Salt Lake City, UT 84147

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.
16/835.018	03/30/2020	Lars Christensen	P006DK.WO.US.01 (87942.00)	7472

TITLE OF INVENTION: METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM

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	04/12/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
TISCHLER, FRANCES	1765	427-356000

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. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/835,018	03/30/2020	Lars Christensen	P006DK.WO.US.01 (87942.00)	7472
26582	7590	01/12/2022	EXAMINER	
Holland & Hart LLP PO Box 11583 Salt Lake City, UT 84147			TISCHLER, FRANCES	
			ART UNIT	PAPER NUMBER
			1765	
DATE MAILED: 01/12/2022				

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. 16/835,018	Applicant(s) Christensen et al.	
	Examiner FRANCES TISCHLER	Art Unit 1765	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 11/18/21.
☐ 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 1-12 and 22. 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>12/3/21</u> .	5. ☒ Examiner's Amendment/Comment 6. ☒ Examiner's Statement of Reasons for Allowance 7. ☐ Other _____.
--	---

/FRANCES TISCHLER/
Primary Examiner, Art Unit 1765

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.

Status of the Claims

Receipt is acknowledged of the Applicant's response filed on 11/18/21. Claim 1 has been amended. New claims 21 – 22 have been added. Claims 13 – 20 are withdrawn due to a restriction requirement. Claims 1 - 22 are now pending.

All outstanding objections and rejections, except for those maintained below, are withdrawn in light of applicant's amendments/remarks filed on 11/18/21.

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 a telephone interview with Leah Villarreal on 12/3/21.

The application has been amended as follows:

Cancel claims 13 – 21 without prejudice.

In claim 22, last line, change “one or more layers.” to - - one or more layers, and wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m². - -

REASONS FOR ALLOWANCE

Claims 1 - 12 and 22 are allowed.

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

The present claims are allowable over the closest references of ADAMS (US 2005/0037162) and of BOWEN et al (US 6,120,860).

ADAMS discloses a process of making a film that provides good oxygen barrier properties, wherein the film comprises several layers, including an aluminum base layer, a COC-containing contact layer, an EAA-containing tie layer, and several more layers, and wherein one or more layers comprise a filler. ADAMS fails to teach making a film consisting only of a base layer comprising aluminum, and a coextrusion layer consisting only of a tie layer and a contact layer, and wherein the contact layer consists of only COC. ADAMS discloses that the film is used for making cartons for orange juice or milk; failing to teach an aggressive chemical-resistant film which is resistant to a chemical selected from nicotine, fentanyl, rivastigmine or lidocaine. ADAM gives an example of a tie loading of 14 lbs/3000 ft², which is equivalent to 70 g/m²; failing to teach 7 – 20 g/m².

BOWEN discloses a process of making a package comprising a multilayer film, the process comprising providing a high barrier/base layer comprising nylon or aluminum, a flexible barrier comprising nylon, and coextruding a tie layer and a sealant/contact layer to coat the base layer or flexible barrier on one of its side and a tie and sealant layer on its other side. The contact layer comprises polyolefin polymers, polyolefin copolymers or EVA; failing to teach COC. BOWEN fails to teach making a film consisting only of a base layer comprising aluminum, and a coextrusion layer consisting only of the tie layer and the contact layer, and wherein the contact layer consists of only COC. BOWEN discloses that the film is used for making packages for containing organics such as amines, xylenes, toluene, epoxies, and the like; failing to teach aggressive chemical selected explicitly from nicotine, fentanyl, rivastigmine or lidocaine.

The closest prior art of record fails to teach or render obvious the claimed method for providing an aggressive chemical-resistant film, wherein the film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine, said method comprising: providing a base layer, wherein the base layer comprises aluminum and is resistant to one or more of water or oxygen; coextruding a tie layer and a contact layer to provide a coextrusion layer, wherein the contact layer consists of a cycloolefin copolymer (COC); coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer comprising the aluminum; and allowing the coextrusion layer coated to the base layer to adhere to form the aggressive chemical-resistant film, wherein the aggressive chemical-resistant film consists of: the base layer comprising the aluminum, and the coextrusion layer consisting of the tie layer, and the

contact layer consisting of COC, wherein the tie layer comprises one or more layers, and wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m².

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."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANCES TISCHLER whose telephone number is (571)270-5458. The examiner can normally be reached on Monday-Friday, 8:00 AM - 8:00 PM EST, midday flex.

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, James Seidleck can be reached on 571-272-1078. 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.

/FRANCES TISCHLER/
Primary Examiner, Art Unit 1765

<i>Examiner-Initiated Interview Summary</i>	Application No. 16/835,018	Applicant(s) Christensen et al.		
	Examiner FRANCES TISCHLER	Art Unit 1765	AIA (First Inventor to File) Status Yes	Page 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	Title	Type
FRANCES TISCHLER	Primary Examiner	Telephonic
Leah Villarreal	Attorney of Record	

Date of Interview: 03 December 2021

Issues Discussed:

Other

Discussed the withdrawn composition claims.
Discussed new claims 21-22. Discussed amending claim 22 to add the a loading range to the tie layer.
Authorization for examiner's amendment.

/FRANCES TISCHLER/ Primary Examiner, Art Unit 1765	
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>Index of Claims</i> 	Application/Control No. 16/835,018	Applicant(s)/Patent Under Reexamination Christensen et al.
	Examiner FRANCES TISCHLER	Art Unit 1765

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant						☐ CPA		☒ T.D.		☐ R.1.47
CLAIM		DATE								
Final	Original	02/01/2021	05/17/2021	09/14/2021	12/01/2021					
1	1	✓	✓	✓	=					
2	2	✓	✓	✓	=					
3	3	✓	✓	✓	=					
4	4	✓	✓	✓	=					
5	5	✓	✓	✓	=					
6	6	✓	✓	✓	=					
7	7	✓	✓	✓	=					
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	14	N	N	N	-					
	15	N	N	N	-					
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	17	N	N	N	-					
	18	N	N	N	-					
	19	N	N	N	-					
	20	N	N	N	-					
	21				-					
13	22				=					

Search Notes 	Application/Control No. 16/835,018	Applicant(s)/Patent Under Reexamination Christensen et al.
	Examiner FRANCES TISCHLER	Art Unit 1765

CPC - Searched*		
Symbol	Date	Examiner
B05D1/265 OR B32B15/082 OR B32B15/20 OR B32B1/00 OR B32B2250/05 OR B32B2307/714 OR B32B2307/7244 OR B32B2307/7265 OR B32B2323/00 OR B32B2398/20 OR B32B2439/00 OR B32B27/08 OR B32B27/306 OR B32B27/308 OR B32B27/32 OR B32B27/325 OR B32B27/34 OR B32B27/36 OR B32B37/153 OR B32B7/12	02/01/2021	/FT/
updated search	05/17/2021	/FT/
updated search	09/14/2021	/FT/
updated search	12/01/2021	/FT/

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.

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<i>Search Notes</i> 	Application/Control No. 16/835,018	Applicant(s)/Patent Under Reexamination Christensen et al.
	Examiner FRANCES TISCHLER	Art Unit 1765

Search Notes		
Search Notes	Date	Examiner
East text search; inventor and company search; classification search, codes shown above; combination of East text search and classification search; combination of East text search and inventor search; combination of East text search and company search; considered/examined all IDS; searched google scholar and google patent and IP.com; search terms included, for instance: (cycloolefin or COC) and (base adj layer) and ((tie adj layer) or (adhesive adj layer) or (sealant) or (sealing adj layer) or (sealant adj layer)) and ((contact adj layer) or (flexible adj layer)) and coextrud\$5 and (ethylene adj acrylic)	02/01/2021	/FT/
updated search	05/17/2021	/FT/
updated search	09/14/2021	/FT/
updated search	12/01/2021	/FT/

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	see search above; interference search	12/01/2021	/FT/

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Issue Classification 	Application/Control No. 16/835,018	Applicant(s)/Patent Under Reexamination Christensen et al.	
	Examiner FRANCES TISCHLER	Art Unit 1765	

CPC						
Symbol					Type	Version
B32B	/	15	/	082	F	2013-01-01
B32B	/	27	/	308	I	2013-01-01
B32B	/	7	/	12	I	2013-01-01
B32B	/	27	/	36	I	2013-01-01
B32B	/	27	/	34	I	2013-01-01
B32B	/	15	/	20	I	2013-01-01
B32B	/	27	/	306	I	2013-01-01
B32B	/	27	/	32	I	2013-01-01
B32B	/	27	/	08	I	2013-01-01
B32B	/	27	/	325	I	2013-01-01
B05D	/	1	/	265	I	2013-01-01
B32B	/	37	/	153	I	2013-01-01
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B32B	/	2307	/	714	A	2013-01-01
B32B	/	2398	/	20	A	2013-01-01
B32B	/	2323	/	00	A	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version
/				

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 13	
/FRANCES TISCHLER/ Primary Examiner, Art Unit 1765 (Primary Examiner) _____ (Date) _____		03 December 2021 O.G. Print Claim(s) 1	O.G. Print Figure fig 4

Issue Classification 	Application/Control No. 16/835,018	Applicant(s)/Patent Under Reexamination Christensen et al.
	Examiner FRANCES TISCHLER	Art Unit 1765

INTERNATIONAL CLASSIFICATION			
CLAIMED			
B32B15/082	/	15	/ 082

NON-CLAIMED			
/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	13	
/FRANCES TISCHLER/ Primary Examiner, Art Unit 1765	03 December 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	fig 4

Issue Classification 	Application/Control No. 16/835,018	Applicant(s)/Patent Under Reexamination Christensen et al.
	Examiner FRANCES TISCHLER	Art Unit 1765

☐ 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		19										
2	2	11	11		20										
3	3	12	12		21										
4	4		13	13	22										
5	5		14												
6	6		15												
7	7		16												
8	8		17												
9	9		18												

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 13	
/FRANCES TISCHLER/ Primary Examiner, Art Unit 1765 (Primary Examiner) _____ (Date) _____		03 December 2021 O.G. Print Claim(s) 1	O.G. Print Figure fig 4

Bibliographic Data

Application No: 16/835,018

Foreign Priority claimed: ☐ Yes ☒ No

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

Verified and Acknowledged: /FRANCES TISCHLER/

Examiner's Signature

Initials

Title:

METHOD FOR PROVIDING AN EXTREME CHEMICAL
RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE
THEREFROM

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
03/30/2020	427	1765	P006DK.WO.US.01 (87942.00)
RULE			

APPLICANTS

Danapak Flexibles A/S, Slagelse, DENMARK

INVENTORS

Lars Christensen, Slagelse, DENMARK

Peter Johansen, Odense C, DENMARK

Torben Fogtmann, Nyborg, DENMARK

CONTINUING DATA

This application is a CON of 15780999 06/01/2018

15780999 is a 371 of PCT/EP2016/082876 12/29/2016

FOREIGN APPLICATIONS

EPO EP15202962.5 12/29/2016

IF REQUIRED, FOREIGN LICENSE GRANTED**

04/08/2020

STATE OR COUNTRY

DENMARK

ADDRESS

Holland & Hart LLP

PO Box 11583

Salt Lake City, UT 84147

UNITED STATES

FILING FEE RECEIVED

\$1,720

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1	"20200223185".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 17:13
S2	1	"6120860".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:07
S4	1	"20040234790".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:10
S5	1	"20050106344".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:11
S6	1	"6790496".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:12
S7	1	"20050037162".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:47
S8	302	((("CHRISTENSEN") near3 ("Lars")) OR ((("JOHANSEN") near3 ("Peter")) OR ((("FOGTMANN") near3 ("Torben")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	NEAR	ON	2021/01/31 19:50
S9	3	((("DANAPAK") near3 ("FLEXIBLES") near3 ("A/S"))).AS,AANM.	USPAT	NEAR	ON	2021/01/31 19:50
S10	142	((("DANAPAK") near3 ("FLEXIBLES"))).AS,AANM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/01/31 19:51
S11	350,512	(B05D1/265 OR B32B15/082 OR B32B15/20 OR B32B1/00 OR B32B2250/05 OR B32B2307/714 OR B32B2307/7244 OR B32B2307/7265 OR B32B2323/00 OR B32B2398/20 OR B32B2439/00 OR B32B27/08 OR B32B27/306 OR B32B27/308 OR B32B27/32 OR B32B27/325 OR B32B27/34 OR B32B27/36 OR B32B37/153 OR B32B7/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/01/31 19:53

S12	22	(cycloolefin or COC) and (base adj layer) and (tie adj layer) and (contact adj layer) and coextrud\$5 and (ethylene adj acrylic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/01/31 19:55
S13	14	("20090208685" "20110158564" "20150225151" "20160325534" "20170158400" "5613958" "6670423" "6891018" "6921563" "8703283" "8722164" "9452593" "9487918" "9663281").PN.	US-PGPUB; USPAT	NEAR	ON	2021/01/31 19:57
S14	1	"20160325534".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:58
S15	0	S12 and S14	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:59
S16	0	S12 and S13	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:59
S17	3	S12 and S8	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:59
S18	3	S12 and S10	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:59
S19	21	S12 and S11	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 20:01
S20	0	S12 and S2	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 20:02
S21	0	S12 and S3	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 20:02
S22	0	S12 and S4	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 20:02
S23	0	S12 and S5	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 20:02
S24	0	S12 and S6	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 20:02

S25	0	S12 and S7	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 20:02
S26	25	(cycloolefin or COC) and (base adj layer) and ((tie adj layer) or (adhesive adj layer) or (sealant) or (sealing adj layer) or (sealant adj layer)) and ((contact adj layer) or (flexible adj layer)) and coextrud\$5 and (ethylene adj acrylic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/02/01 08:55
S27	1	((cycloolefin or COC) and layer and coextrud\$5 and (ethylene adj acrylic)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/02/01 13:20
S28	302	((("CHRISTENSEN") near3 ("Lars")) OR ((("JOHANSEN") near3 ("Peter"))) OR ((("FOGTMANN") near3 ("Torben")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	NEAR	ON	2021/02/01 13:21
S29	3	((cycloolefin or COC) and layer and coextrud\$5 and (ethylene adj acrylic)) and S28	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/02/01 13:21
S30	142	((("DANAPAK") near3 ("FLEXIBLES"))).AS,AANM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/02/01 13:21
S31	4	((cycloolefin or COC) and layer and coextrud\$5 and (ethylene adj acrylic)) and S30	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/02/01 13:21
S32	1	"20200223185".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/05/17 16:18
S33	145	((("DANAPAK") near3 ("FLEXIBLES"))).AS,AANM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/05/17 16:33

S34	309	((("CHRISTENSEN") near3 ("Lars"))) OR ((("JOHANSEN") near3 ("Peter"))) OR ((("FOGTMANN") near3 ("Torben"))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	NEAR	ON	2021/05/17 16:33
S35	22	(cycloolefin or COC) and (base adj layer) and (tie adj layer) and (contact adj layer) and coextrud\$5 and (ethylene adj acrylic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/05/17 16:34
S36	4	S35 and S33	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/05/17 16:35
S37	3	S35 and S34	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/05/17 16:35
S38	1	"20200223185".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/09/14 19:31
S39	313	((("CHRISTENSEN") near3 ("Lars"))) OR ((("JOHANSEN") near3 ("Peter"))) OR ((("FOGTMANN") near3 ("Torben"))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	NEAR	ON	2021/09/15 13:18
S40	151	((("DANAPAK") near3 ("FLEXIBLES"))).AS,AANM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/09/15 13:18
S41	35	(cycloolefin or COC) and (base adj layer) and ((tie or adhesive) adj layer) and ((contact or sealant or sealing) adj layer) and coextrud\$5 and (ethylene adj acrylic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/09/15 13:19
S42	3	S41 and S39	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/09/15 13:19

S43	4	S41 and S40	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/09/15 13:19
S44	1	"20200047461".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/11/09 17:38
S45	1	"20150225151".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/12/01 09:09

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S46	237	((("CHRISTENSEN") near3 ("Lars"))) OR ((("JOHANSEN") near3 ("Peter"))) OR ((("FOGTMANN") near3 ("Torben"))).INV.	US- PGPUB; USPAT	NEAR	ON	2021/12/01 09:01
S47	18	((("DANAPAK") near3 ("FLEXIBLES"))).AS,AANM.	US- PGPUB; USPAT	NEAR	ON	2021/12/01 09:01
S48	36	(cycloolefin or COC) and (base adj layer) and ((tie or adhesive) adj layer) and ((contact or sealant or sealing) adj layer) and coextrud\$5 and (ethylene adj acrylic)	US- PGPUB; USPAT	NEAR	ON	2021/12/01 09:02
S49	65,561	(B05D1/265 OR B32B15/082 OR B32B15/20 OR B32B1/00 OR B32B2250/05 OR B32B2307/714 OR B32B2307/7244 OR B32B2307/7265 OR B32B2323/00 OR B32B2398/20 OR B32B2439/00 OR B32B27/08 OR B32B27/306 OR B32B27/308 OR B32B27/32 OR B32B27/325 OR B32B27/34 OR B32B27/36 OR B32B37/153 OR B32B7/12).CPC.	US- PGPUB; USPAT	NEAR	ON	2021/12/01 09:02
S50	1	((cycloolefin or COC) and (base adj layer) and ((tie or adhesive) adj layer) and ((contact or sealant or sealing) adj layer) and coextrud\$5 and (ethylene adj acrylic)).clm.	US- PGPUB; USPAT	NEAR	ON	2021/12/01 09:03
S51	3	S48 and S46	US- PGPUB; USPAT	NEAR	ON	2021/12/01 09:03
S52	3	S48 and S47	US- PGPUB; USPAT	NEAR	ON	2021/12/01 09:03

S53	36	S48 and S49	US- PGPUB; USPAT	NEAR	ON	2021/12/01 09:03
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United States Patent and Trademark Office

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Document Code:WFEE

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Sale Accounting Date:11/30/2021

Sale Item Reference Number

16835018

Effective Date

11/18/2021

Document Number

I2021ATA15082038

Fee Code

1201

Fee Code Description

INDEPENDENT CLAIMS IN
EXCESS OF 3

Amount Paid

\$480.00

Payment Method

Deposit Account



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :71473

Sale Accounting Date:11/30/2021

Sale Item Reference Number
16835018

Effective Date
11/18/2021

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I2021ATA12152002	1202	CLAIMS IN EXCESS OF 20	\$200.00	Deposit Account

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Christensen et al.

For: A METHOD FOR PROVIDING AN
EXTREME CHEMICAL RESISTANT
FILM, A FILM AND LAMINATE
OBTAINABLE THEREFROM

Application No.: 16/835,018

Filed: March 30, 2020

Docket No.: P006DK.WO.US.01
(87942.0014)

Customer No.: 26582

Confirmation No.: 7472

Examiner: Frances Tischler

Art Unit: 1765

AMENDMENT**CERTIFICATE OF TRANSMISSION**

I hereby certify that this correspondence is being filed
via EFS-Web with the United States Patent and
Trademark Office on: November 18, 2021.

By: / Wendy Nishida /
Wendy Nishida

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

Commissioner:

In response to the non-final Office Action dated September 30, 2021, please enter the
following amendments and remarks:

Amendments to the Claims begin on page 2.

Remarks begin on page 6.

Amendments to the Claims

Please enter the following amendments to the claims:

1. (Currently Amended) A method for providing an aggressive chemical-resistant film, wherein the film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine, said method comprising:
 - providing a base layer, wherein the base layer comprises aluminum and is resistant to one or more of water or oxygen;
 - coextruding a tie layer and a contact layer to provide a coextrusion layer, wherein the contact layer consists of a cycloolefin copolymer (COC);
 - coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer comprising the aluminum; and
 - allowing the coextrusion layer coated to the base layer to adhere to form the aggressive chemical-resistant film, wherein the aggressive chemical-resistant film consists of: the base layer comprising the aluminum, and the coextrusion layer consisting of the tie layer, and the contact layer consisting of COC,wherein the tie layer comprises one or more layers, and wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m².
2. (Original) The method according to claim 1, wherein a melting point of the tie layer differs from a melting point of COC by 30°C or less.
3. (Original) The method according to claim 2, wherein the melting point of the tie layer differs from the melting point of COC by a value in the range of 5–15°C.
4. (Previously Presented) The method according to claim 1, wherein the contact layer has a loading in the range of 4 to 20 g/m².
5. (Previously Presented) The method according to claim 1, wherein a loading of an entirety of the tie layer is in the range of 7 to 20 g/m².
6. (Previously Presented) A method according to claim 1, wherein a loading of at least a portion of the tie layer is in the range of 7 to 20 g/m².

7. (Previously Presented) The method according to claim 1, wherein the one or more layers of the tie layer comprises a plurality of layers, and wherein a loading of the plurality of layers is in the range of 7 to 20 g/m².

8. (Original) The method according to claim 1, wherein the one or more layers of the tie layer consists of two layers.

9. (Original) The method according to claim 1, wherein coating the coextrusion layer to the base layer comprises performing a coextrusion coating.

10. (Original) The method according to claim 1, wherein at least one of the one or more layers of the tie layer comprises an acrylic acid layer or a polyethylene layer.

11. (Original) The method according to claim 1, wherein the one or more layers of the tie layer comprises an acrylic acid layer and a polyethylene layer.

12. (Original) The method according to claim 11, wherein the acrylic acid layer comprises ethylene acrylic acid.

13. (Withdrawn) A film comprising:
a base layer that is resistant to one or more of water or oxygen; and
a coextrusion layer, said coextrusion layer comprising a tie layer and a contact layer, said tie layer being positioned in between the base layer and the contact layer;
wherein the tie layer comprises one or more layers, and wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²;
wherein the contact layer comprises a cycloolefin copolymer (COC).

14. (Withdrawn) The film according to claim 13, wherein a melting point of the tie layer differs from a melting point of COC by 30°C or less.

15. (Withdrawn) The film according to claim 13, wherein the melting point of the tie layer differs from the melting point of COC by a value in the range of 5–15°C.

16. (Withdrawn) The film according to claim 13, wherein a loading of an entirety of the tie layer is in the range of 7 to 20 g/m².

17. (Withdrawn) The film according to claim 13, wherein a loading of at least a portion of the tie layer is in the range of 7 to 20 g/m².

18. (Withdrawn) The film according to claim 12, wherein the coextrusion layer is coextrusion coated to the base layer.

19. (Withdrawn) The film according to claim 12, wherein the tie layer comprises an acrylic acid layer and a polyethylene layer.

20. (Withdrawn) The film layer according to claim 18, wherein the acrylic acid layer comprises ethylene acid.

21. (New) A method for providing an aggressive chemical-resistant film, wherein the film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine, said method comprising:

providing a base layer, wherein the base layer comprises aluminum and is resistant to one or more of water or oxygen;

coextruding a tie layer and a contact layer to provide a coextrusion layer, wherein the contact layer consists of a cycloolefin copolymer (COC);

coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer comprising the aluminum; and

allowing the coextrusion layer coated to the base layer to adhere to form the aggressive chemical-resistant film, wherein the aggressive chemical-resistant film consists of: the base layer comprising the aluminum, and the coextrusion layer consisting of the tie layer, and the contact layer consisting of COC, wherein the tie layer comprises one or more layers.

22. (New) A method for providing a laminate, wherein the laminate comprises an aggressive chemical-resistant film, said method comprising:

providing a base layer, wherein the base layer comprises aluminum and is resistant to one or more of water or oxygen;

coextruding a tie layer and a contact layer to provide a coextrusion layer, wherein the contact layer consists of a cycloolefin copolymer (COC);

coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer comprising the aluminum; and

allowing the coextrusion layer coated to the base layer to adhere to form the aggressive chemical-resistant film, wherein the aggressive chemical-resistant film consists of: the base layer comprising the aluminum, and the coextrusion layer consisting of the tie layer, and the contact layer consisting of COC, wherein the aggressive chemical-resistant film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine,

wherein the tie layer comprises one or more layers.

REMARKS

Status of the Claims

Before this Amendment, claims 1–12 were present for examination and claims 13–20 were previously withdrawn from consideration. In this Amendment: claim 1 is amended; no claims are canceled; claim 21 is added. Therefore, claims 1–12, 21, and 22 are present for examination, and claims 1, 21, and 22 are the independent claim. Support for the amendments to the claims may be found throughout the Specification as filed including at least at Paragraphs [0012], [0040], [0050], [0065], and [0116], as well as Figures 1 and 2. No new matter is added with these amendments.

In the non-final Office Action dated September 30, 2021 (“Office Action”): claims 1–12 were rejected under 35 U.S.C. § 103 over U.S. Patent Publication No. 2005/0037162 to Adams (“Adams”); claims 1–12 were rejected under 35 U.S.C. § 103 over U.S. Patent No. 6,120,860 to Bowen et al. (“Bowen”) and U.S. Patent Publication No. 2005/0037162 to Adams (“Adams”). Applicant respectfully requests reconsideration.

Examiner Interview

Applicant thanks Examiner Tischler for granting a telephone interview with Applicant’s representatives on November 10, 2021.

During the interview, Applicant’s representatives discussed the claimed features of “coextruding a tie layer and a contact layer to provide a coextrusion layer consisting of the tie layer and the contact layer.” The claimed features were contrasted with those of the references cited in the standing rejection of the claims. Examiner Tischler acknowledged distinctions between the pending claims and the cited references, and agreed to reconsider the claims in view of the discussion.

Applicant thanks Examiner Tischler for the courtesies extended during the interview.

35 U.S.C. § 103

The Office Action rejected claims 1–12 under 35 U.S.C. § 103 over Adams. The Office Action further rejected claims 1–12 over the stated combinations of Adams and Bowen.

Factual findings made by the Office are the “necessary underpinnings to establish obviousness.” MPEP § 2141(II). The Office must set forth “the relevant teachings of the prior art relied upon.” MPEP § 2142. In *KSR International Co. v. Teleflex Inc.*, the Supreme Court noted that the analysis supporting a rejection under 35 U.S.C. § 103 must be made explicit. *See* 550 U.S. 398, 418 (2007); MPEP § 2142. “[O]bviousness [also] requires a suggestion of all limitations in a claim.” *In re Wada and Murphy*, Appeal 2007-3733 (citing *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003)).

Independent Claim 1

Without conceding the merits of the rejection of independent claim 1 under 35 U.S.C. § 103—and solely to expedite prosecution—Applicant has amended independent claim 1. For example, independent claim 1 has been amended to recite, in part, “[a] method for providing an aggressive chemical-resistant film, wherein the film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine” and “wherein the aggressive chemical-resistant film consists of: the base layer comprising the aluminum, and the coextrusion layer consisting of the tie layer, and the contact layer consisting of COC.” Independent claims 21 and 22 have been added to include similar features.

35 U.S.C. § 103 over Adams

Specifically, Adams does not disclose “[a] method for providing an aggressive chemical-resistant film, wherein the film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine” and “wherein the aggressive chemical-resistant film consists of: the base layer comprising the aluminum, and the coextrusion layer consisting of the tie layer, and the contact layer consisting of COC,” as recited in amended independent claim 1.

Adams is generally directed to “a laminate structure having improved resistance to the migration of essential oils, aromas and flavors and improved oxygen barriers characteristics for beverage packing.” Adams, Abstract. Adams describes that “the peel oil concentrations determined on cartons in duplicate for each filler loading percent and storage time clearly demonstrate the reduction in absorption of peel oil as loading increased.” *Id.*, ¶ [0040]. Adams further describes that “since the orange juice was used for all cartons (i.e., equal oil concentrations), the initial absorption rate of peel oil is, therefore, greatest for lowest addition

level.” *Id.*, ¶ [0042]. However, a laminate structure (e.g., cartons containing orange juice) is not the same as “[a] method for providing an aggressive chemical-resistant film, wherein the film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine,” as recited in amended independent claim 1.

Rather, Adams describes that “the laminate structure of the invention can be used in laminates comprising a coated paperboard substrate for use in the production of containers and cartons for products such as juices, punches, milk and other beverages.” *Id.*, ¶ [0011]. However, juices, punches, milk and other beverages are not the same as and do not teach or suggest “a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine” much less “[a] method for providing an aggressive chemical-resistant film, wherein the film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine,” as recited in amended independent claim 1. Therefore, Adams does not teach or suggest “[a] method for providing an aggressive chemical-resistant film, wherein the film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine,” as recited in amended independent claim 1.

In addition, Adams does not teach or suggest “wherein the aggressive chemical-resistant film consists of: the base layer comprising the aluminum, and the coextrusion layer consisting of the tie layer, and the contact layer consisting of COC,” as recited in amended independent claim 1.

At the portions cited by the Office Action, Adams describes “suitable polyolefins for use in sublayers include, but are not limited to, LDPE, HDPE, LLDPE, polypropylene, cyclic olefin copolymers (COC), and blends thereof.” *Id.*, ¶ [0023]. With reference to FIG. 2, Adams describes that “the laminate structure of FIG. 2 comprises an exterior coating 9 that is applied onto the paperboard substrate 10.” *Id.*, ¶ [0031]. However, a laminate structure including a substrate and exterior coating is not the same as a “wherein the aggressive chemical-resistant film *consists of: the base layer* comprising the aluminum, *and the coextrusion layer consisting of the tie layer, and the contact layer consisting of COC*,” as recited in amended independent claim 1 (emphasis added). Rather, Adams describes example laminate structures that include *more than* a base layer, a tie layer, and a contact layer. *Id.*, ¶ [0034]. Therefore, Adams does not disclose “wherein the aggressive chemical-resistant film consists of: the base layer comprising

the aluminum, and the coextrusion layer consisting of the tie layer, and the contact layer consisting of COC,” as recited in amended independent claim 1.

With reference to FIG. 3, Adams describes that “the laminate structure of FIG. 3 differs from the structure of FIG. 2 in that there is applied directly onto the tie layer with or without filler 19, an additional layer or layers containing filler 20 onto which layer(s) 20 an interior layer or food contact layer without filler 21 is applied.” *Id.*, ¶ [0031]. However, a laminate structure including a tie layer 19, a food contact layer 21, *and* additional layer or layers of filler 20 is not the same as a “wherein the aggressive chemical-resistant film *consists of: the base layer* comprising the aluminum, *and the coextrusion layer consisting of the tie layer, and the contact layer consisting of COC,*” as recited in amended independent claim 1 (emphasis added). Rather, Adams describes that “that there is applied directly onto the tie layer with or without filler 19, an additional layer or layers containing filler 20.” *Id.*, ¶ [0031]. That is, Adams describes a laminate structure that includes at least a filler. Therefore, Adams does not disclose “wherein the aggressive chemical-resistant film consists of: the base layer comprising the aluminum, and the coextrusion layer consisting of the tie layer, and the contact layer consisting of COC,” as recited in amended independent claim 1.

Further, Adams does not teach or suggest “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1. The Office Action concedes, and Applicant agrees, that Adams is silent regarding the loading value of the tie layer. *See* Office Action, p. 4.

Instead the Office Action states that “merely selecting proportions and ranges in not patentable absent a showing of criticality.” *Id.* The Office Action further states that “Applicant is invited to show experimental proof of new and unexpected results for the claimed loading.” *Id.* Applicant submits that the loading value of the tie layer is critical and the current application provides support for unexpected results in at least Paragraphs [0012], [0050], and [0065] of the Application, among other sections.

In addition, Adams does not teach or suggest the importance of the tie layer loading. Rather, Adams describes that “the peel oil concentrations determined on cartons in duplicate for each filler loading percent and storage time clearly demonstrate the reduction in absorption of

peel oil as loading increased.” Adams, ¶ [0040]. That is, Adams describes that increasing an amount of filler gives the lowest absorption of peel oil. However, Adams fails to teach or suggest the importance of the tie layer thickness. Therefore, Adams does not teach or suggest “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1.

Because Adams does not teach or suggest all the features of amended claim 1, the loading value of the tie layer cannot be inherently the same as claimed. Accordingly, the Office Action has failed to establish a *prima facie* case of obviousness for the claimed loading value of the tie layer in view of Adams.

Therefore, for at least these reasons, amended independent claim 1 is allowable over any combination of Adams. New independent claims 21 and 22 include features similar to those of amended independent claim 1 and are likewise allowable for at least similar reasons.

35 U.S.C. § 103 over Adams and Bowen

In addition, Adams and Bowen—alone or in any combination—do not teach or suggest “wherein the aggressive chemical-resistant film consists of the base layer comprising the aluminum, and the coextrusion layer consisting of the tie layer, and the contact layer consisting of COC,” as recited in amended independent claim 1.

Bowen is generally directed to “multilayer film structures and packages.” Bowen, Abstract. At the portions cited by the Office Action, Bowen describes “a tie can be between the flexible barrier material and the sealant.” *Id.*, col. 4, ll. 43-44. Bowen further describes that “EVA/tie/nylon/tie/EVA or, more generally, sealant/tie/nylon/tie/sealant . . . can be formed as a coextrusion which is then adhered to the second layer element.” *Id.*, col. 4, ll. 47-50. However, the coextrusion does not include a cycloolefin copolymer (COC) much less “wherein the aggressive chemical-resistant film *consists of: the base layer comprising the aluminum*, and the coextrusion layer consisting of the tie layer, and the contact layer *consisting of COC*,” as recited in amended independent claim 1 (emphasis added). Rather, Bowen describes example structures that include *more than* a base layer comprising aluminum, a tie layer, and a contact layer consisting of COC. *Id.* Therefore, Bowen does not teach or suggest “wherein the aggressive chemical-resistant film consists of: the base layer comprising the aluminum, and the coextrusion

layer consisting of the tie layer, and the contact layer consisting of COC,” as recited in amended independent claim 1, nor does the Office Action allege otherwise.

Adams fails to cure the deficiencies of Bowen. As discussed above, Adams does not disclose “wherein the aggressive chemical-resistant film consists of: the base layer comprising the aluminum, and the coextrusion layer consisting of the tie layer, and the contact layer consisting of COC,” as recited in amended independent claim 1.

Further, Adams and Bowen—alone or in any combination—do not teach or suggest “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1. The Office Action concedes, and Applicant agrees, that Bowen in view of Adams is silent regarding the loading range values of the layers. *See* Office Action, p. 7.

Instead the Office Action states that “merely selecting proportions and ranges in not patentable absent a showing of criticality.” *Id.* The Office Action further states that “Applicant is invited to show experimental proof of new and unexpected results for the claimed loading.” *Id.* Applicant submits that the loading value of the tie layer is critical and the current application provides support for unexpected results in at least Paragraphs [0012], [0050], and [0065] of the Application, among other sections.

As described above, Adams does not teach or suggest the importance of the tie layer loading. Further, Bowen does not teach or suggest the importance of the tie layer loading. Rather, Bowen describes that “polymer tie layers can be as thin as about 0.15 mil.” Bowen, col. 6, ll. 54-55. That is, Bowen describes a thickness of the tie layer to be about 3 g/m². However, Bowen fails to teach or suggest the importance of the tie layer thickness. Therefore, Bowen does not teach or suggest “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1.

Because Adams and Bowen do not teach or suggest all the features of amended claim 1, the loading value of the tie layer cannot be inherently the same as claimed. Accordingly, the Office Action has failed to establish a *prima facie* case of obviousness for the claimed loading value of the tie layer in view of Adams and Bowen.

Therefore, for at least these reasons, amended independent claim 1 is allowable over any combination of Adams and Bowen. New independent claims 21 and 22 include features similar to those of amended independent claim 1 and are likewise allowable for at least similar reasons.

Accordingly, Applicant requests that the rejection of independent claims 1 and 21 under 35 U.S.C. § 103 be withdrawn.

Dependent Claims 2–12

Dependent claims 2–12 each depend from independent claim 1, and are therefore allowable for at least the same reasons that independent claim 1 is allowable.

Accordingly, for at least these reasons, Applicant requests that the rejection of dependent claims 2–12 under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is therefore respectfully requested.

The Commissioner is authorized to charge any fees or underpayments that may be due with this response, or credit any overpayments, to Deposit Account No. 08-2623.

If the Examiner believes a telephone conference would expedite prosecution of this Application, please call the undersigned at (303) 473-2700.

Respectfully submitted,

By: / Paul M. Schramm /
Paul M. Schramm
Reg. No. 62,050

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Fax: 303-473-2720

Electronic Acknowledgement Receipt

EFS ID:	44320837
Application Number:	16835018
International Application Number:	
Confirmation Number:	7472
Title of Invention:	METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM
First Named Inventor/Applicant Name:	Lars Christensen
Customer Number:	26582
Filer:	Paul M. Schramm/Wendy Nishida
Filer Authorized By:	Paul M. Schramm
Attorney Docket Number:	P006DK.WO.US.01 (87942.00
Receipt Date:	18-NOV-2021
Filing Date:	30-MAR-2020
Time Stamp:	18:25:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		P006Danapak.pdf	142087	yes	13
			8163c9caf6a11e608b27e7bde9367631d40d690		

	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	13

Warnings:

Information:

Total Files Size (in bytes):	142087
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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 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.

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.

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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 16/835,018		Filing Date 03/30/2020		☐ 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), (i), 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	11/18/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 22	Minus	** 20	= 2		x \$100 =		200		
	Independent (37 CFR 1.16(h))	* 4	Minus	*** 3	= 1		x \$480 =		480		
	☐ Application Size Fee (37 CFR 1.16(s))										
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
								TOTAL ADD'L FEE		680	
		(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".								/BRUCE D HARRISON/			
*** 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.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/835,018	03/30/2020	Lars Christensen	P006DK.WO.US.01 (87942.00)	7472
26582	7590	11/16/2021	EXAMINER	
Holland & Hart LLP PO Box 11583 Salt Lake City, UT 84147			TISCHLER, FRANCES	
			ART UNIT	PAPER NUMBER
			1765	
			NOTIFICATION DATE	DELIVERY MODE
			11/16/2021	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):

patentdocket@hollandhart.com

<i>Applicant-Initiated Interview Summary</i>	Application No. 16/835,018	Applicant(s) Christensen et al.		
	Examiner FRANCES TISCHLER	Art Unit 1765	AIA (First Inventor to File) Status Yes	Page 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	Title	Type
FRANCES TISCHLER	Primary Examiner	Telephonic
Leah Villarreal	Attorney of Record	

Date of Interview: 10 November 2021

Issues Discussed:

Proposed Amendment(s)

Discussed that ADAMS does not explicitly teach a film consisting of only an aluminum base layer and a coextrusion layer consisting of a tie layer and a contact layer. Discussed amending claim 1 to recite such limitation.

Discussed amending claim 1 to recite that the film is an aggressive chemical resistant film, the chemical being selected from nicotine, fentanyl, rivastigamine or lidocaine, but noting that BOWEN's film is also drawn to an aggressive solvent film.

Applicant will respond with amendments/remarks in writing.

/FRANCES TISCHLER/ Primary Examiner, Art Unit 1765	
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: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the 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.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/835,018	03/30/2020	Lars Christensen	P006DK.WO.US.01 (87942.00)	7472
26582	7590	09/30/2021	EXAMINER	
Holland & Hart LLP			TISCHLER, FRANCES	
PO Box 11583				
Salt Lake City, UT 84147				
			ART UNIT	PAPER NUMBER
			1765	
			NOTIFICATION DATE	DELIVERY MODE
			09/30/2021	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):

patentdocket@hollandhart.com

Office Action Summary

Application No.

16/835,018

Applicant(s)

Christensen et al.

Examiner

FRANCES TISCHLER

Art Unit

1765

AIA (FITF) Status

Yes

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1) ☒ Responsive to communication(s) filed on 8/19/21.

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

2a) ☐ This action is **FINAL**.

2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

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

Disposition of Claims*

5) ☒ Claim(s) 1-20 is/are pending in the application.

5a) Of the above claim(s) 13-20 is/are withdrawn from consideration.

6) ☐ Claim(s) ____ is/are allowed.

7) ☒ Claim(s) 1-12 is/are rejected.

8) ☐ Claim(s) ____ is/are objected to.

9) ☐ Claim(s) ____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

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

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

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a) ☒ All b) ☐ Some** c) ☐ None of the:

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

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

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

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

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

3) ☐ Interview Summary (PTO-413)

Paper No(s)/Mail Date ____.

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)

4) ☐ Other: ____.

Paper No(s)/Mail Date 7/14/21.

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 8/19/21 has been entered.

Status of the Claims

Receipt is acknowledged of the Applicant's response filed on 8/19/21. Claim 1 has been amended. Claims 13 – 20 are withdrawn due to a restriction requirement. Claims 1 - 12 are now pending.

All outstanding objections and rejections, except for those maintained below, are withdrawn in light of applicant's amendments/remarks filed on 8/19/21.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 1 - 12 are rejected under 35 U.S.C. 103 as being unpatentable over ADAMS (US 2005/0037162).

Claims 1 and 4 – 9: ADAMS discloses (see entire document) a process of making a film that provides good oxygen barrier properties ([0004]) [as claimed], the process comprising:

providing a base layer, referred to as a functional barrier layer, comprising aluminum, polyamide or PET ([0019]) [also reading on the claimed resistant to water or oxygen, since they are the same layer as recited in the present invention, see for ex. [0033] of the instant Published Application] or additional base layers such as paperboard substrate, exterior coating, and additional layers with or without fillers;

providing one or more tie layers and one or more contact layers, wherein the tie layer is selected from ethylene acrylic acid (EAA) and the contact layer is selected from cycloolefin copolymer (COC) ([0023], [0024], [0030], table in [0034]), claims 7, 10, 14) [as claimed]; and

coextruding layers onto the base layer to coat said base layer, wherein the coextruded layers comprise the tie layers and any additional layer ([0028], [0044], [0045], figures). It would have been obvious to one of ordinary skill in the art to have chosen to coextrude the tie layer with the COC contact layer since ADAMS discloses to coextrude the tie layer with any other layer.

Regarding the limitation that the contact layer consists of COC, ADAMS discloses that the contact layer may or may not have a filler (abstract); discloses one or more olefin contact layers [i.e., COC layers] overlaying the functional barrier layer, wherein at least one of which incorporates fillers ([0011]); and further discloses that

economic and converting configuration considerations dictate whether one, some or all layers between the functional barrier and food product have filler added ([0025]) [wherein the COC layers not having fillers read on the claimed layers consisting of COC]. Alternatively and in addition, it would have been obvious to one of ordinary skill in the art to have used COC layers without fillers since ADAMS discloses to choose to either add or not add filler and that the choice of using fillers or not using fillers depends on economic and converting configuration considerations.

ADAMS is silent regarding a loading value range for the tie layer, giving only an example of a structure having a tie layer load of 14 lbs/3000ft². However, ADAMS' silence as to a required load range implies that ADAMS is open to any load, and one of ordinary skill in the art would know to vary the weight/thickness/load of the tie layer depending on the end-use of the film and as a matter of design choice to achieve ADAMS' stated objective of making a film comprising a base layer and coextruded tie and contact layers that provides for good packaging with good oxygen barrier and is effective in minimizing scalping ([0004]), and have thus arrived at the claimed loading. It is well established that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). It has also been settled that merely selecting proportions and ranges is not patentable absent a showing of criticality. *In re Becket*, 33 U.S.P.Q. 33 (C.C.P.A. 1937). *In re Russell*, 439 F.2d 1228, 169 U.S.P.Q. 426 (C.C.P.A. 1971). Thus, Applicant is invited to show experimental proof of new and unexpected results for the claimed loading.

Claims 2 – 3: ADAMS is silent regarding the melting points of the layers.

However, since ADAMS discloses the claimed process of making the film and the claimed layers comprising COC and EAA, their melting point values are necessarily the same as claimed. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir.1990). “Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established.” See MPEP 2112.01. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

Claims 10-12: ADAMS discloses few contact layers to choose from comprising linear polyolefins or cyclic olefin copolymer ([0023]) and few tie layers to choose from comprising ethylene acrylic acid, polyolefins and vinyl acetate ([0024], claim 10). If the genus is small, if one can at once envisage each member of the group, then it is anticipated. *In re Petering* 301 F.2d 676, 681 (CCPA 1962). Alternately, it would be obvious to one skilled in the art to choose from ADAMS’ small list of tie polymers and contact polymers the combination that produces ADAMS’ stated objective of making a film comprising a base layer, and tie and contact layers that provides for good packaging with good oxygen barrier and is effective in minimizing scalping ([0004]), and have thus arrived at the claimed combination of COC of claim 1 and the acrylic acids of claims 10-12.

Claims 1 - 12 are rejected under 35 U.S.C. 103 as being unpatentable over BOWEN et al (US 6,120,860) in view of ADAMS (US 2005/0037162).

ADAMS' disclosure is discussed above and is incorporated herein by reference.

BOWEN discloses (see entire document) a process of making a package comprising multilayer film, the process comprising providing a base layer and coextruding a tie layer and a sealant layer to coat the base layer (abstract). The film structure has superior properties for holding organics, wherein the film comprises high barrier materials (2:48-3:7).

The laminate comprises a first and second layer which can have additional layers (3:40-44).

The adhesive or tie layer can consist of a plurality of layers and is chosen from polyethylene and preferably ethylene acrylic acid (EAA) (3:52-4:10, 4:51-63) [as claimed].

The high barrier material is aluminum or nylon (4:10-16) [thus reading on the claimed water or oxygen resistant, noting that they are the same materials used in the present invention], and BOWEN further discloses that the high barrier prevents water or moisture to contact the product in the package (5:15-32) [meeting the claimed water resistant layer].

BOWEN also discloses a flexible barrier, which comprises nylon (4:31, 5:15-32) upon which the tie layer and the sealant layer are disposed [therefore the flexible barrier is also deemed to read on the claimed base layer]. For instance, one sequence of layers is disclosed as sealant/tie/nylon/tie/sealant (4:49). In other words, the tie layer

and the sealant layer are placed directly onto the nylon base layer [as claimed] on both sides of the nylon base layer.

The layers are coextruded and adhered to the core layer (4:49-51) [as claimed].

BOWEN discloses that the sealant or contact layer is selected from polyolefin polymers, polyolefin copolymers or EVA (4:32-42), failing to teach that the olefin copolymer is explicitly a cycloolefin copolymers. However, it would have been obvious to one of ordinary skill in the art to have replaced BOWEN's olefin copolymer with ADAMS' cycloolefin copolymer with the motivation that ADAMS discloses that linear polyolefins and cyclic olefin copolymers are interchangeably used as contact layers ([0023]) in the same field of endeavor disclosed by both references of making a package comprising a multilayered film having a base layer of aluminum or nylon/polyamide, and coextruded a coating film comprising an EAA tie layer and an olefin contact layer onto said base layer and wherein the film is resistant to water and oxygen and resistant to the fluid in the package.

BOWEN discloses a thickness for the combined layers in a range of 0.5 to 100 mils thick and that the tie layer can be as thin as 0.15 mil (6:41-62), but is silent regarding expressing the thickness of the tie layers in terms of loading of the tie layers. However, thickness is directly related to loading (i.e. the thicker the layers the heavier the layers, and vice versa); and BOWEN discloses that if the tie layers are too thin, the layers would be too weak to perform their required function. In light of such disclosure, it would have been obvious to one of ordinary skill in the art to have varied the thickness and therefore the load of the layers and that the tie layer not be below 0.15 mil, through routine experimentation, to achieve BOWEN's stated objective of making a tie layer that

is thick enough to perform its required function and of making a film comprising a base layer, and tie and contact layers that provides for high barrier packaging, and have thus arrived at the claimed loading. It is well established that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” *In re Aller*, 220F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). It has also been settled that merely selecting proportions and ranges is not patentable absent a showing of criticality. *In re Becket*, 33 U.S.P.Q. 33 (C.C.P.A. 1937). *In re Russell*, 439 F.2d 1228, 169 U.S.P.Q. 426 (C.C.P.A. 1971). Applicant is invited to show experimental proof of new and unexpected results for the claimed loading.

Claims 2-3: BOWEN in view of ADAMS is silent regarding the melting point of the layers. However, since the references disclose the claimed process of making the film and the claimed layers comprising COC and EAA, their melting point values are necessarily the same as claimed. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir.1990). “Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established.” See MPEP 2112.01. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

Response to Arguments

Applicant's arguments filed 8/19/21 have been fully considered but they are not persuasive.

Applicant submits that the Terminal Disclaimers for 15/780,999 and 16/425,067 have been filed.

In response, please note that the TDs have been approved and entered.

Applicant submits, regarding ADAMS, that a description of figures 2 and 3 and that coextruding the tie layer 19, a food contact layer 21, and additional layer or layers of filler 20 is not the same as the claimed coextrusion layer consisting the tie layer and the COC of the contact layer; that ADAMS describes that there is applied directly onto the tie layer with or without filler 19, an additional layer or layers containing filler 20 onto which layer 20 an interior layer or food content layer without filler 21 is applied; that ADAMS does not disclose that the coextruded layer consisting of the tie layer and the COC contact layer are coextruded directly to the base layer; that ADAMS describes a method for applying the tie layer to the base and applying additional layers to the tie layer; that ADAMS discloses that the tie layer 13 with or without filler is applied adjacent the barrier layer 12.

Applicant's argument has been considered but is not persuasive:

ADAMS discloses a film comprising (i) a base layer/functional barrier layer [as claimed] or several base layers including the functional barrier layer, paperboard and exterior coating, ii) a contact layer made of COC [as claimed], and (iii) a tie layer made of EAA [as claimed].

ADAMS discloses that the tie layer and the additional layers can be coextruded. Thus, one can easily envision the COC layer as the additional layer being coextruded with the tie layer.

ADAMS discloses various scenarios for the order of layers and discloses that these are for illustrating the invention and are not to be construed as limitations thereof ([0034]). Several examples (figures and table in [0034]) discloses a base layer/functional barrier layer on which is applied an EAA tie layer and a COC contact layer.

It is noted that even if the illustrations show the tie layer directly placed on the base layer, followed by the COC layer placed on the tie layer, it does not mean that the tie layer and the COC layer were not coextruded. In fact, the same is true of the present invention. Fig 1 of the present invention, for instance, shows a base layer 2 and a coextrusion layer 5 comprising tie layer 3 and contact layer 4, wherein the tie layer is shown to be directly on top of the base layer while the contact layer lies on top of the tie layer ([0142]).

Regarding ADAMS' filler, ADAMS discloses that the contact layer may or may not have filler. See abstract: "...the innermost food contact layer which may or may not contain filler." ADAMS' COC contact layer not having filler reads on the claimed contact layer consisting of COC.

Applicant submits that the Office has not provided analysis to support that ADAMS is silent regarding the claimed loading of 7 to 20 g/m²; that ADAMS describes

in one example that the tie layer includes a target coating weight of 14 lbs/3000 ft², which is equivalent to 70 g/m².

In response, ADAMS gives only one example of a loading value. ADAMS' silence as to a required load range implies that ADAMS is open to any load, and one of ordinary skill in the art would know to vary the weight/thickness/load of the tie layer depending on the end-use of the film and as a matter of design choice to achieve ADAMS' stated objective of making a film comprising a base layer and coextruded tie and contact layers that provides for good packaging with good oxygen barrier and is effective in minimizing scalping ([0004]).

It is well established that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

It is also well established that merely selecting proportions and ranges is not patentable absent a showing of criticality. *In re Becket*, 33 U.S.P.Q. 33 (C.C.P.A. 1937). *In re Russell*, 439 F.2d 1228, 169 U.S.P.Q. 426 (C.C.P.A. 1971). Applicant is invited to show experimental proof of new and unexpected results for the claimed loading.

Applicant submits that BOWEN discloses a tie layer between the flexible barrier and the sealant; that sealant/tie/nylon/tie/sealant can be formed as coextrusion which is then adhered to the second layer element; that the coextrusion does not consist of a COC and tie layer coextruded directly to the base layer, as per claim 1.

Applicant's argument has been considered but is not persuasive:

BOWEN's process comprises providing a base layer and coextruding a tie layer and a sealant layer to coat the base layer (abstract). The layers are coextruded and adhered to the core layer (4:49-51). BOWEN discloses polyolefins but not explicitly cycloolefins (COC). However, it would have been obvious to one of ordinary skill in the art to have replaced BOWEN's olefin copolymer with ADAMS' cycloolefin copolymer with the motivation that ADAMS discloses that linear polyolefins and cyclic olefin copolymers are interchangeably used as contact layers ([0023]) in the same field of endeavor disclosed by both references of making a package comprising a multilayered film having a base layer of aluminum or nylon/polyamide, and coextruded a coating film comprising an EAA tie layer and an olefin contact layer onto said base layer and using the film to make a package that is resistant air and water from the outside and does not allow the liquid in the package to penetrate the layers.

Applicant submits that the Office did not provide an analysis to support that BOWEN is silent regarding the claimed loading of 7 to 20 g/m²; that BOWEN discloses that the polymer tie layers can be as thin as about 0.15 mil, which is equivalent to 3 g/m² so that BOWEN is actually teaching away for the claimed range of 7 – 20 g/m².

Applicant's argument has been considered but is not persuasive:

BOWEN discloses a thickness for the combined layers in a range of 0.5 to 100 mils thick and that the tie layer can be as thin as 0.15 mil (6:41-62). By being as thin as 0.15 mil it means that it can be thicker, but just not thinner than 0.15 mil. In fact, BOWEN also discloses that if the film is too thin, the layers would be too weak to perform their required function.

One of ordinary skill in the art would know to vary the thickness and therefore the load of the tie layer, through routine experimentation, to achieve BOWEN's stated objective of making a tie layer that is thick enough to perform its function and of making a film comprising a base layer, and tie and contact layers that provides for high barrier packaging, and have thus arrived at the claimed loading. It is well established that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). It has also been established that merely selecting proportions and ranges is not patentable absent a showing of criticality. *In re Becket*, 33 U.S.P.Q. 33 (C.C.P.A. 1937). *In re Russell*, 439 F.2d 1228, 169 U.S.P.Q. 426 (C.C.P.A. 1971). Applicant is invited to show experimental proof of new and unexpected results for the claimed loading.

Applicant submits that it would not have been obvious to combine the teachings of ADAMS and BOWEN; that a person of ordinary skill would not expect the films of BOWEN to work when replacing sealant layers of BOWEN with polymers mentioned in ADAMS because BOWEN is directed at aggressive solvents which is different from food/juices of ADAMS; that in one example BOWEN uses nylon as the barrier for containing organic products such as solvents within the package, rather than polyolefins as the sealant layer; that therefore a person of ordinary skill cannot conclude that the sealant layer of BOWEN is the layer responsible for given properties sought in the different applications; thus it would not be obvious to replace an olefin copolymers of the sealant layer of BROWN with a cycloolefin copolymer of ADAMS because it is the

combination of layers (including nylon and of the flexible barrier) taught that contributes to the barrier properties within the package of BOWEN.

Applicant's argument has been considered but is not persuasive:

BOWEN discloses a film comprising (i) an outside layer of which is called a high barrier material [reading on the claimed base layer] comprising aluminum or nylon (4:10-16), and an (ii) inside layer which comprises a flexible barrier material, a tie/adhesive layer, and a sealant material (3:10-22), wherein the sealant material is faced inwardly where it is in contact with the liquid/solvent/organics that is being contained in the package made of said film (5:45-55). Therefore, nylon is the base material, not the argued sealant. BOWEN's sealant layer reads on the claimed contact layer.

The tie/adhesive layer is selected from EAA (3:52-60, 4:51-63) [as claimed] and is placed between the flexible barrier material and the sealant material (4:42-43).

The flexible barrier can also be made of nylon (4:31, 5:15-32), which is therefore also considered a base layer, upon which the tie layer and the sealant layer are disposed. For instance, one sequence of layers is disclosed as sealant/tie/nylon/tie/sealant (4:49). In other words, the tie layer and the sealant layer are placed directly onto the nylon base layer, as claimed, and are placed on both sides of the nylon base layer.

The sealant/contact layer, which is faced inwardly where it is in contact with the liquid/solvent/organics, is selected from olefin-based polymers, polyolefin copolymers or EVA (4:32-42) but BOWEN is silent regarding whether the polyolefin copolymer can be a cycloolefin copolymer (COC), explicitly, as the sealant/contact layer. However,

ADAMS discloses that linear polyolefins and cyclic olefin copolymers are interchangeably used as contact layers ([0023]) in the same field of endeavor disclosed by both references of making a package comprising a multilayered film having a base layer of aluminum or nylon/polyamide, and coextruded a coating film comprising an EAA tie layer and an olefin contact layer onto said base layer. Thus, one of ordinary skill in the art would be motivated to replace BOWEN's olefin copolymer with ADAMS' cycloolefin copolymer.

As far as the argument that the references are not combinable, both references teach the same method of making a package comprising a multilayered film having a base layer of aluminum or nylon/polyamide, and coextruded a coating film comprising an EAA tie layer and an olefin copolymer contact layer onto said base layer, and both references address the same problem of ensuring that the liquid in the packages made of the film don't leak out and the that oxygen or water from outside does not leak in. Although the liquid which is placed in the packages made of the film may be different in ADAMS and BOWEN, a cycloolefin is still an olefin and should be replaceable with reasonable expectation of success, and further noting that BOWEN discloses that the contents of a package of this invention is not be to be considered a limitation of this invention (6:27-30).

Contact Information

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

(571)270-5458. The examiner can normally be reached on Monday-Friday, 8:00 AM - 8:00 PM EST, midday flex.

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, James Seidleck can be reached on 571-272-1078. 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 <https://ppair-my.uspto.gov/pair/PrivatePair>. 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.

/FRANCES TISCHLER/
Primary Examiner, Art Unit 1765

<i>Index of Claims</i> 	Application/Control No. 16/835,018	Applicant(s)/Patent Under Reexamination Christensen et al.
	Examiner FRANCES TISCHLER	Art Unit 1765

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	02/01/2021	05/17/2021	09/14/2021						
	1	✓	✓	✓						
	2	✓	✓	✓						
	3	✓	✓	✓						
	4	✓	✓	✓						
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	19	N	N	N						
	20	N	N	N						

<i>Search Notes</i> 	Application/Control No. 16/835,018	Applicant(s)/Patent Under Reexamination Christensen et al.
	Examiner FRANCES TISCHLER	Art Unit 1765

CPC - Searched*		
Symbol	Date	Examiner
B05D1/265 OR B32B15/082 OR B32B15/20 OR B32B1/00 OR B32B2250/05 OR B32B2307/714 OR B32B2307/7244 OR B32B2307/7265 OR B32B2323/00 OR B32B2398/20 OR B32B2439/00 OR B32B27/08 OR B32B27/306 OR B32B27/308 OR B32B27/32 OR B32B27/325 OR B32B27/34 OR B32B27/36 OR B32B37/153 OR B32B7/12	02/01/2021	/FT/
updated search	05/17/2021	/FT/
updated search	09/14/2021	/FT/

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.

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<i>Search Notes</i> 	Application/Control No. 16/835,018	Applicant(s)/Patent Under Reexamination Christensen et al.
	Examiner FRANCES TISCHLER	Art Unit 1765

Search Notes		
Search Notes	Date	Examiner
East text search; inventor and company search; classification search, codes shown above; combination of East text search and classification search; combination of East text search and inventor search; combination of East text search and company search; considered/examined all IDS; searched google scholar and google patent and IP.com; search terms included, for instance: (cycloolefin or COC) and (base adj layer) and ((tie adj layer) or (adhesive adj layer) or (sealant) or (sealing adj layer) or (sealant adj layer)) and ((contact adj layer) or (flexible adj layer)) and coextrud\$5 and (ethylene adj acrylic)	02/01/2021	/FT/
updated search	05/17/2021	/FT/
updated search	09/14/2021	/FT/

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

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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S2	1	"6120860".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:07
S4	1	"20040234790".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:10
S5	1	"20050106344".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:11
S6	1	"6790496".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:12
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S9	3	((("DANAPAK") near3 ("FLEXIBLES") near3 ("A/S"))).AS,AANM.	USPAT	NEAR	ON	2021/01/31 19:50
S10	142	((("DANAPAK") near3 ("FLEXIBLES"))).AS,AANM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/01/31 19:51
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S18	3	S12 and S10	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/01/31 19:59
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S30	142	((("DANAPAK") near3 ("FLEXIBLES"))).AS,AANM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/02/01 13:21
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S33	145	((("DANAPAK") near3 ("FLEXIBLES"))).AS,AANM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/05/17 16:33

S34	309	((("CHRISTENSEN") near3 ("Lars")) OR ((("JOHANSEN") near3 ("Peter"))) OR ((("FOGTMANN") near3 ("Torben")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	NEAR	ON	2021/05/17 16:33
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S36	4	S35 and S33	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/05/17 16:35
S37	3	S35 and S34	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/05/17 16:35
S38	1	"20200223185".pn.	US-PGPUB; USPAT; USOCR	NEAR	ON	2021/09/14 19:31
S39	313	((("CHRISTENSEN") near3 ("Lars")) OR ((("JOHANSEN") near3 ("Peter"))) OR ((("FOGTMANN") near3 ("Torben")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	NEAR	ON	2021/09/15 13:18
S40	151	((("DANAPAK") near3 ("FLEXIBLES"))).AS,AANM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/09/15 13:18
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S43	4	S41 and S40	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	NEAR	ON	2021/09/15 13:19
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EAST Search History (Interference)

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OMB 0651-0031

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	16/835,018
Filing Date	March 30, 2020
First Named Inventor	Christensen et al.
Art Unit	1765
Examiner Name	Frances Tischler
Docket Number	P006DK.WO.US.01 (87942.0014)

Sheet 1 of 2

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Document Number Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	01	EP 0245921-A2	11-19-1987	International Paper Company	12 pgs.	

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶

Examiner Signature	/FRANCES TISCHLER/	Date Considered	09/14/2021
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 2.98. 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 2 hours 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 Office, U.S. Patent and Trademark Office, 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

PTO/SB/08A&B

OMB 0651-0031

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

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Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT***(Use as many sheets as necessary)***Complete if Known**

Application Number	16/835,018
Filing Date	March 30, 2020
First Named Inventor	Christensen et al.
Art Unit	1765
Examiner Name	Frances Tischler
Docket Number	P006DK.WO.US.01 (87942.0014)

Sheet 2 of 2

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	/ Steven A. Avena /	Date (YYYY-MM-DD)	2021-07-14
Name/Print	Steven A. Avena	Registration Number	75,211

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.**

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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 16/835,018		Filing Date 03/30/2020		☐ 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), (i), 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	08/19/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 20	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".								/BRENDA MURPHY/			
*** 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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Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed		PTO/SB/25 U.S. Patent and Trademark Office Department of Commerce	
Electronic Petition Request	TERMINAL DISCLAIMER TO OBIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION		
Application Number	16835018		
Filing Date	30-Mar-2020		
First Named Inventor	Lars Christensen		
Attorney Docket Number	P006DK.WO.US.01 (87942.00		
Title of Invention	METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM		
☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action ☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.			
Owner	Percent Interest		
Danapak Flexibles A/S	100%		
The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)			
16425067 filed on 05/29/2019 15780999 filed on 06/01/2018 as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns. In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.			
☒ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.			

☐ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.	
Applicant claims the following fee status: ☐ Small Entity ☐ Micro Entity ☒ Regular Undiscounted	
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.	
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES 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 is of record in this application Registration Number <u>75211</u> ☐ A sole inventor ☐ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ☐ A joint inventor; all of whom are signing this request	
Signature	/Steven A. Avena/
Name	Steven A. Avena

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
 Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	16835018			
Filing Date:	30-Mar-2020			
Title of Invention:	METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM			
First Named Inventor/Applicant Name:	Lars Christensen			
Filer:	Steven Anthony Avena/Wendy Nishida			
Attorney Docket Number:	P006DK.WO.US.01 (87942.00			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	1814	1	170	170
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				170

Doc Code: DISQ.E.FILE

Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 16835018

Filing Date: 30-Mar-2020

Applicant/Patent under Reexamination: Christensen

Electronic Terminal Disclaimer filed on August 19, 2021

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	43550025
Application Number:	16835018
International Application Number:	
Confirmation Number:	7472
Title of Invention:	METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM
First Named Inventor/Applicant Name:	Lars Christensen
Customer Number:	26582
Filer:	Steven Anthony Avena/Wendy Nishida
Filer Authorized By:	Steven Anthony Avena
Attorney Docket Number:	P006DK.WO.US.01 (87942.00
Receipt Date:	19-AUG-2021
Filing Date:	30-MAR-2020
Time Stamp:	13:24:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 170
RAM confirmation Number	E20218ID24181308
Deposit Account	082623
Authorized User	Wendy Nishida

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

921175

092

37 CFR 1.19 (Document supply fees)
 37 CFR 1.20 (Post Issuance fees)
 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	44902	no	2
			efe6e6bb3a5317eea39c9a578847616e2397d725c		

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	38231	no	2
			94ce556f7feca166ce0e22a7c027d83c10a1e389		

Warnings:

Information:

Total Files Size (in bytes):	83133
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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 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.

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.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	16/835,018	Filing Date	2020-03-30	Docket Number (if applicable)	P006DK.WO.US* (87942.00)	Art Unit	1765
First Named Inventor	Christensen et al.			Examiner Name	Frances Tischler		

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 082623

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

Signature of Registered U.S. Patent Practitioner

Signature	/ Steven A. Avena /	Date (YYYY-MM-DD)	2021-08-19
Name	Steven A. Avena	Registration Number	75211

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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Christensen et al.

For: A METHOD FOR PROVIDING AN
EXTREME CHEMICAL RESISTANT
FILM, A FILM AND LAMINATE
OBTAINABLE THEREFROM

Application No.: 16/835,018

Filed: March 30, 2020

Docket No.: P006DK.WO.US.01
(87942.0014)

Customer No.: 26582

Confirmation No.: 7472

Examiner: Frances Tischler

Art Unit: 1765

AMENDMENT WITH RCE**CERTIFICATE OF TRANSMISSION**

I hereby certify that this correspondence is being filed
via EFS-Web with the United States Patent and
Trademark Office on: August 19, 2021.

By: / Wendy Nishida /
Wendy Nishida

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

Commissioner:

In response to the final Office Action dated May 24, 2021, please enter the following
amendments and remarks:

Amendments to the Claims begin on page 2.**Remarks begin on page 5.**

Amendments to the Claims

Please enter the following amendments to the claims:

1. (Currently Amended) A method for providing a film, said method comprising:
providing a base layer, wherein the base layer is resistant to one or more of water or oxygen;
coextruding a tie layer and a contact layer to provide a coextrusion layer, wherein the contact layer consists of a cycloolefin copolymer (COC) ~~to provide a coextrusion layer~~;
coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer; and
allowing the coextrusion layer coated to the base layer to adhere to form the film, ~~wherein the film comprises the tie layer and the contact layer formed as a coextrusion layer coated to the base layer~~,
wherein the tie layer comprises one or more layers, and wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m².
2. (Original) The method according to claim 1, wherein a melting point of the tie layer differs from a melting point of COC by 30°C or less.
3. (Original) The method according to claim 2, wherein the melting point of the tie layer differs from the melting point of COC by a value in the range of 5–15°C.
4. (Previously Presented) The method according to claim 1, wherein the contact layer has a loading in the range of 4 to 20 g/m².
5. (Previously Presented) The method according to claim 1, wherein a loading of an entirety of the tie layer is in the range of 7 to 20 g/m².
6. (Previously Presented) A method according to claim 1, wherein a loading of at least a portion of the tie layer is in the range of 7 to 20 g/m².

7. (Previously Presented) The method according to claim 1, wherein the one or more layers of the tie layer comprises a plurality of layers, and wherein a loading of the plurality of layers is in the range of 7 to 20 g/m².

8. (Original) The method according to claim 1, wherein the one or more layers of the tie layer consists of two layers.

9. (Original) The method according to claim 1, wherein coating the coextrusion layer to the base layer comprises performing a coextrusion coating.

10. (Original) The method according to claim 1, wherein at least one of the one or more layers of the tie layer comprises an acrylic acid layer or a polyethylene layer.

11. (Original) The method according to claim 1, wherein the one or more layers of the tie layer comprises an acrylic acid layer and a polyethylene layer.

12. (Original) The method according to claim 11, wherein the acrylic acid layer comprises ethylene acrylic acid.

13. (Withdrawn) A film comprising:
a base layer that is resistant to one or more of water or oxygen; and
a coextrusion layer, said coextrusion layer comprising a tie layer and a contact layer, said tie layer being positioned in between the base layer and the contact layer;
wherein the tie layer comprises one or more layers, and wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²;
wherein the contact layer comprises a cycloolefin copolymer (COC).

14. (Withdrawn) The film according to claim 13, wherein a melting point of the tie layer differs from a melting point of COC by 30°C or less.

15. (Withdrawn) The film according to claim 13, wherein the melting point of the tie layer differs from the melting point of COC by a value in the range of 5–15°C.

16. (Withdrawn) The film according to claim 13, wherein a loading of an entirety of the tie layer is in the range of 7 to 20 g/m².

17. (Withdrawn) The film according to claim 13, wherein a loading of at least a portion of the tie layer is in the range of 7 to 20 g/m².

18. (Withdrawn) The film according to claim 12, wherein the coextrusion layer is coextrusion coated to the base layer.

19. (Withdrawn) The film according to claim 12, wherein the tie layer comprises an acrylic acid layer and a polyethylene layer.

20. (Withdrawn) The film layer according to claim 18, wherein the acrylic acid layer comprises ethylene acid.

REMARKS

Status of the Claims

Before this Amendment, claims 1–12 were present for examination and claims 13–20 were previously withdrawn from consideration. In this Amendment: claim 1 is amended; no claims are canceled; and no new claims are added. Therefore, claims 1–12 are present for examination, and claim 1 is the independent claim. Support for the amendments to the claims may be found throughout the Specification as filed including at least at Paragraphs [0040] and [0116], as well as Figures 1 and 2. No new matter is added with these amendments.

In the final Office Action dated May 24, 2021 (“Office Action”): claims 1–12 were rejected under 35 U.S.C. § 112(b) as being indefinite; claims 1–12 were rejected under 35 U.S.C. § 103 over U.S. Patent Publication No. 2005/0037162 to Adams (“Adams”); claims 1–12 were rejected under 35 U.S.C. § 103 over U.S. Patent No. 6,120,860 to Bowen et al. (“Bowen”) and U.S. Patent Publication No. 2005/0037162 to Adams (“Adams”); claims 1–12 were rejected for non-statutory double patenting over U.S. Patent No. 16,425,067 to Johansen et al. (“Johansen”); and claims 1–12 were rejected for non-statutory double patenting over U.S. Patent No. 16,780,999 to Gu et al. (“Gu”). Applicant respectfully requests reconsideration.

Examiner Interview

Applicant thanks Examiner Tischler for granting and participating in a telephonic interview to discuss this application on July 22, 2021. During the interview, the present amendments to the claims were discussed. The Examiner indicated that an additional search of the art would be conducted in light of the present amendments. Though no final agreement was reached, the Examiner suggested that the present amendments appear to overcome the cited art.

Non-Statutory Double Patenting

It appears that the Office Action incorrectly listed U.S. Patent Application No. 16,780,999 to Gu et al. (“Gu”) instead of U.S. Patent Application No. 15,780,999 to Christensen et al. (“Christensen”). Without conceding the merits of the rejection—and solely to expedite prosecution—Applicant has addressed the rejection in view of Christensen. The Office Action rejected claims 1–12 on the ground of non-statutory obviousness-type double patenting

over claims 1–20 of Johansen and claims 1–36 Christensen. *See* Office Action, pp. 9 and 10. The Office Action states that the filing of a terminal disclaimer would overcome the double patenting rejection. *See id.*, p. 8.

Applicant has submitted an electronic terminal disclaimer with this response. Applicant submits this terminal disclaimer to expedite allowance of the pending claims and does not concede the merits of the double patenting rejection or any determination regarding whether claims 1–10 are patentably distinct over claims 1–20 of Johansen and claims 1–36 of Christensen.

Applicant believes that the terminal disclaimer overcomes the double patenting rejection, and accordingly requests that the double patenting rejection of claims 1–12 be withdrawn.

35 U.S.C. § 112(b)

The Office Action rejected claims 1–12 under 35 U.S.C. § 112(b) as being allegedly indefinite.

Regarding claim 1, the Office Action alleges that “it is unclear what is being claimed as directly coating the base layer.” *See* Office Action, p. 3. Without conceding the merits of the rejection of independent claim 1 under 35 U.S.C. § 112(b)—and solely to expedite prosecution—Applicant has amended independent claim 1. For example, independent claim 1 has been amended to recite, in part, “coextruding a tie layer and a contact layer to provide a coextrusion layer, wherein the contact layer consists of a cycloolefin copolymer (COC)” and “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer.”

Accordingly, Applicant requests that the rejection of claims 1–12 under 35 U.S.C. § 112(b) be withdrawn.

35 U.S.C. § 102 & § 103

The Office Action rejected claims 1–12 under 35 U.S.C. § 102 over Adams or alternatively, under 35 U.S.C. § 103 over Adams. The Office Action further rejected claims 1–12 under 35 U.S.C. § 103 over the stated combinations of Adams and Bowen.

Factual findings made by the Office are the “necessary underpinnings to establish obviousness.” MPEP § 2141(II). The Office must set forth “the relevant teachings of the prior art relied upon.” MPEP § 2142. In *KSR International Co. v. Teleflex Inc.*, the Supreme Court noted that the analysis supporting a rejection under 35 U.S.C. § 103 must be made explicit. See 550 U.S. 398, 418 (2007); MPEP § 2142. “[O]bviousness [also] requires a suggestion of all limitations in a claim.” *In re Wada and Murphy*, Appeal 2007-3733 (citing *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003)).

Independent Claim 1

Without conceding the merits of the rejection of independent claim 1 under 35 U.S.C. § 102 and § 103—and solely to expedite prosecution—Applicant has amended independent claim 1. For example, independent claim 1 has been amended to recite, in part, “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer.”

35 U.S.C. § 102

Specifically, Adams does not disclose “coating *the coextrusion layer consisting of the tie layer and the COC* of the contact layer directly to the base layer,” as recited in amended independent claim 1 (emphasis added).

Adams is generally directed to “a laminate structure having improved resistance to the migration of essential oils, aromas and flavors and improved oxygen barriers characteristics for beverage packing.” Adams, Abstract. At the portions cited by the Office Action, Adams describes “suitable polyolefins for use in sublayers include, but are not limited to, LDPE, HDPE, LLDPE, polypropylene, cyclic olefin copolymers (COC), and blends thereof.” *Id.*, ¶ [0023]. With reference to FIG. 3, Adams describes that “the laminate structure of FIG. 3 differs from the structure of FIG. 2 in that there is applied directly onto the tie layer with or without filler 19, an additional layer or layers containing filler 20 onto which layer(s) 20 an interior layer or food contact layer without filler 21 is applied.” *Id.*, ¶ [0031]. Adams further describes that “applying the tie layer and other layers can be achieved by either coextrusion or by standard lamination or extrusion lamination processes.” *Id.*, ¶ [0028]. However, coextruding the tie layer 19, a food contact layer 21, *and* additional layer or layers of filler 20 is not the same as a “coextrusion layer

consisting of the tie layer and the COC of the contact layer,” as recited in amended independent claim 1 (emphasis added). Rather, Adams describes that “that there is applied directly onto the tie layer with or without filler 19, an additional layer or layers containing filler 20.” *Id.*, ¶ [0031]. Therefore, Adams does not disclose “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer,” as recited in amended independent claim 1.

In addition, Adams does not disclose “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer *directly to* the base layer,” as recited in amended independent claim 1 (emphasis added). As discussed above, Adams describes that “there is applied directly onto the tie layer with or without filler 19, an additional layer or layers containing filler 20 onto which layer(s) 20 an interior layer or food contact layer without filler 21 is applied.” *Id.*, ¶ [0031]. Adams further describes that “a tie layer 13 with or without filler is applied adjacent the barrier layer 12.” *Id.*, ¶ [0030]. However, applying additional layer(s) *containing filler* to the tie layer is not the same as “coating the coextrusion layer *consisting of the tie layer and the COC of the contact layer directly to* the base layer,” as recited in amended independent claim 1 (emphasis added). That is, Adams describes a method for applying the tie layer to the base layer and applying the additional layer(s) containing filler to the tie layer. However, as discussed above, Adams does not disclose “the coextrusion layer consisting of the tie layer and the COC.” It therefore follows that Adams does not disclose coating the coextrusion layer consisting of the tie layer and the COC of the contact layer *directly to* the base layer,” as recited in amended independent claim 1 (emphasis added).

Further, Adams does not disclose “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1. The Office Action concedes, and Applicant agrees, that Adams is silent regarding the loading range values of the layers. *See* Office Action, p. 4.

Instead the Office Action states that “since the references disclose the claimed process of making the film and the claimed layers comprising COC and EAA, their loading and melting point values are inherently the same as claimed.” *Id.* The Office Action, however, does not provide explicit analysis to support why the features of independent claim 1 can be ignored, let

alone establish (or even argue) that the loading range values are inherently the same as claimed. Applicant submits that the assertion that the loading range values are inherently the same as claimed is inapplicable in the current application.

The Office bears the initial burden to develop reasons supporting a reliance on inherency. *See MPEP* 2112 (IV). To satisfy this burden, the Office must identify some basis or articulate some reasoning at least tending to show that allegedly inherent subject matter inevitability flows from cited art (e.g., Adams). Indeed, the MPEP expressly instructs that “[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.”

However, the Office Action fails to include rationale or evidence at least tending to show that the feature of the loading range values can be inherently the same as claimed. In addition, because Adams does not disclose all the features of amended claim 1, the loading range values cannot be inherently the same as claimed. Thus, for at least the foregoing reasons, the assertion that the loading range values are inherently the same as claimed is inapplicable in the current application. Accordingly, the Office Action has failed to establish a *prima facie* case of obviousness for the claimed loading range values in view of Adams.

In addition, because Adams teaches away from such loading range values, the loading range values cannot be inherently the same as claimed. In one example, Adams describes that the tie layer includes a target coating weight of 14 lbs/3,000 ft². *See* Adams, ¶ [0037]. That is, Adams describes a target coating weight of a tie layer to be about 70 g/m². Adams further describes that “the LDPE layer was extrusion coated on the paperboard[, and] the polyamide and tie layer were then deposited as a coextrusion coating to the paperboard and the polyolefin containing filler [i.e., the food contact layer], then applied over the tie layer.” *Id.*, ¶ [0037]. However, the tie layer that includes a target coating weight of 14 lbs/3,000 ft² is not the same as “the coextrusion layer consisting of the tie layer and the COC of the contact layer,” as recited in independent claim 1. It therefore follows that Adams does not disclose “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1. Rather, because Adams is directed towards a target coating weight of a tie

layer greater than a loading in the range of 7 to 20 g/m², Adams teaches away from such loading range values. That is, Adams discloses a target coating weight different than the claimed loading value of the application.

In other examples, Adams describes in structures E., F., and G. that the outer most polyolefin layer is without filler, but all examples then have an adjacent polyolefin layer with filler. Furthermore, the tie layer and the outermost polyolefin layer are not coextruded and coated to a barrier layer. *See id.* at ¶ [0034]. Therefore Adams does not disclose “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer” much less “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1. Accordingly, Adams does not disclose “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1, nor are the target coating weight values of Adams inherently the same as the loading range values as claimed.

Therefore, for at least these reasons, amended independent claim 1 is allowable over Adams.

Accordingly, Applicant requests that the rejection of independent claim 1 under 35 U.S.C. § 102 be withdrawn.

35 U.S.C. § 103

In addition, Adams and Bowen—alone or in any combination—do not teach or suggest “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer,” as recited in amended independent claim 1.

Bowen is generally directed to “multilayer film structures and packages.” Bowen, Abstract. At the portions cited by the Office Action, Bowen describes “a tie can be between the flexible barrier material and the sealant.” *Id.*, col. 4, ll. 43-44. Bowen further describes that “EVA/tie/nylon/tie/EVA or, more generally, sealant/tie/nylon/tie/sealant . . . can be formed as a coextrusion which is then adhered to the second layer element.” *Id.*, col. 4, ll. 47-50. However, the coextrusion does not include a cycloolefin copolymer (COC) much less “coating the coextrusion layer *consisting of* the tie layer and the COC of the contact layer directly to the base

layer,” as recited in amended independent claim 1 (emphasis added). Therefore, Bowen does not teach or suggest “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer,” as recited in amended independent claim 1, nor does the Office Action allege otherwise.

Adams fails to cure the deficiencies of Bowen. As discussed above, Adams does not disclose “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer,” as recited in amended independent claim 1.

Further, Adams and Bowen—alone or in any combination—do not teach or suggest “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1. The Office Action concedes, and Applicant agrees, that Bowen in view of Adams is silent regarding the loading range values of the layers. *See* Office Action, p. 6.

Instead the Office Action states that “since the references disclose the claimed process of making the film and the claimed layers comprising COC and EAA, their loading and melting point values are inherently the same as claimed.” *Id.* The Office Action, however, does not provide explicit analysis to support why the features of independent claim 1 can be ignored, let alone establish (or even argue) that the loading range values are inherently the same as claimed. Applicant submits that the assertion that the loading range values are inherently the same as claimed is inapplicable in the current application.

The Office bears the initial burden to develop reasons supporting a reliance on inherency. *See MPEP* 2112 (IV). To satisfy this burden, the Office must identify some basis or articulate some reasoning at least tending to show that allegedly inherent subject matter inevitability flows from cited art (e.g., Adams and Bowen). Indeed, the MPEP expressly instructs that “[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.”

However, Office Action fails to include rationale or evidence at least tending to show that the feature of the loading range values can be inherently the same as claimed. In addition, because Adams and Bowens does not teach or suggest all the features of amended claim 1, the

loading range values cannot be inherently the same as claimed. Thus, for at least the foregoing reasons, the assertion that the loading range values are inherently the same as claimed is inapplicable in the current application. Accordingly, the Office Action has failed to establish a *prima facie* case of obviousness for the claimed loading range values in view of Adams and Bowen.

As discussed above, Adams does not disclose “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1, nor are the target coating weight values of Adams inherently the same as the loading range values as claimed. In addition, because Bowen teaches away from such loading range values, the loading range values cannot be inherently the same as claimed. Bowen describes that “polymer tie layers can be as thin as about 0.15 mil.” Bowen, col. 6, ll. 54-55. That is, Bowen describes a thickness of the tie layer to be about 3 g/m². Therefore, Bowen does not teach or suggest “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1. Rather, because Bowen is directed towards a thickness less than a loading in the range of 7 to 20 g/m², Bowen teaches away from such loading range values. That is, Bowen discloses a tie layer thickness different than the claimed loading value of the application. Accordingly, Bowen does not teach or suggest “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1, nor is the tie layer thickness value of Bowen inherently the same as the loading range values as claimed.

In addition, Applicant submits that it would have not been obvious to combine the teachings of Adams and Bowen. Specifically, a person of ordinary skill would not reasonably expect the films of Bowen to work when replacing the sealant layers of Bowen with polymers mentioned in Adams because Bowen is directed at aggressive solvents which is something very different from food/juices of Adams. In one example, Bowen describes that “nylon acts as a good barrier for containing organic products such as solvents, e.g., amines, within the package.” *Id.*, col. 5, ll. 29-30. That is, Bowen describes that nylon is the amine solvent barrier rather than a polyolefin of the sealant layer. Therefore, a person of ordinary skill cannot conclude from Adams and Bowen that the sealant layer of Bowen is the layer responsible for the given properties

sought in the different applications. Thus, it would not have been obvious to replace an olefin copolymer of the sealant layer of Bowen with a cycloolefin copolymer of Adams because it is the combination of layers (e.g., including nylon of the flexible barrier) that contributes to the given barrier properties within the package of Bowen. Therefore, Applicant submits that it would have not been obvious to combine the teachings of Adams and Bowen.

Therefore, for at least these reasons, amended independent claim 1 is allowable over any combination of Adams and Bowen.

Accordingly, Applicant requests that the rejection of independent claim 1 under 35 U.S.C. § 103 be withdrawn.

Dependent Claims 2–12

Dependent claims 2–12 each depend from independent claim 1, and are therefore allowable for at least the same reasons that independent claim 1 is allowable.

Accordingly, Applicant requests that the rejection of dependent claims 2–12 under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is therefore respectfully requested.

The Commissioner is authorized to charge any fees or underpayments that may be due with this response, or credit any overpayments, to Deposit Account No. 08-2623.

If the Examiner believes a telephone conference would expedite prosecution of this Application, please call the undersigned at (303) 473-2700.

Respectfully submitted,

By: / Steven A. Avena /
Steven A. Avena
Reg. No. 75,211

Holland & Hart LLP
P.O. Box 11583
Salt Lake City, Utah 84147
Tel: 303-473-2700
Fax: 303-473-2720

Electronic Patent Application Fee Transmittal

Application Number:	16835018			
Filing Date:	30-Mar-2020			
Title of Invention:	METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM			
First Named Inventor/Applicant Name:	Lars Christensen			
Filer:	Steven Anthony Avena/Wendy Nishida			
Attorney Docket Number:	P006DK.WO.US.01 (87942.00)			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
RCE- 1ST REQUEST	1801	1	1360	1360
Total in USD (\$)				1360

Electronic Acknowledgement Receipt

EFS ID:	43549889
Application Number:	16835018
International Application Number:	
Confirmation Number:	7472
Title of Invention:	METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM
First Named Inventor/Applicant Name:	Lars Christensen
Customer Number:	26582
Filer:	Steven Anthony Avena/Wendy Nishida
Filer Authorized By:	Steven Anthony Avena
Attorney Docket Number:	P006DK.WO.US.01 (87942.00
Receipt Date:	19-AUG-2021
Filing Date:	30-MAR-2020
Time Stamp:	13:13:42
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 1360
RAM confirmation Number	E20218ID14521254
Deposit Account	082623
Authorized User	Wendy Nishida

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

112/175

112

37 CFR 1.19 (Document supply fees)
37 CFR 1.20 (Post Issuance fees)
37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		P006DKWOUS01.pdf	446673	yes	16
			66e5a806cc594178a295153b63b4a20b20ec95b8		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Request for Continued Examination (RCE)		1	2	
	Amendment Submitted/Entered with Filing of CPA/RCE		3	3	
	Claims		4	6	
	Applicant Arguments/Remarks Made in an Amendment		7	16	
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	38310	no	2
			c47ecbd8cd8e97680cc9dfb34dce30b458762ea2		
Warnings:					
Information:					
Total Files Size (in bytes):			484983		

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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.

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/835,018	03/30/2020	Lars Christensen	P006DK.WO.US.01 (87942.00)

26582
Holland & Hart LLP
PO Box 11583
Salt Lake City, UT 84147

CONFIRMATION NO. 7472
POA ACCEPTANCE LETTER



Date Mailed: 08/18/2021

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 08/13/2021.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/zretta/

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	16/835,018
Filing Date	March 30, 2020
First Named Inventor	Christensen et al.
Title	A METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM
Art Unit	1765
Examiner Name	Frances Tischler
Attorney Docket Number	P006DK.WO.US.01 (87942.0014)

SIGNATURE of Applicant or Patent Practitioner

Signature	/ Steven A. Avena /	Date (Optional)	
Name	Steven A. Avena	Registration Number	75,211
Title (if Applicant is a juristic entity)	Attorney		
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☐

*Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.131, 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.**

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number

Filing Date

16/835,018

March 30, 2020

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)



I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

26582

OR



I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:



The address associated with the above-mentioned Customer Number

OR



The address associated with Customer Number:

26582

OR

Firm or
Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Danapak Flexibles A/S



Inventor or Joint Inventor (title not required below)



Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)



Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)



Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature

Date (Optional)

Name

Title

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.131, 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 REE OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Electronic Acknowledgement Receipt

EFS ID:	43502864
Application Number:	16835018
International Application Number:	
Confirmation Number:	7472
Title of Invention:	METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM
First Named Inventor/Applicant Name:	Lars Christensen
Customer Number:	26582
Filer:	Steven Anthony Avena/Wendy Nishida
Filer Authorized By:	Steven Anthony Avena
Attorney Docket Number:	P006DK.WO.* (87942.0014)
Receipt Date:	13-AUG-2021
Filing Date:	30-MAR-2020
Time Stamp:	12:15:28
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	P006DKWOUS01POA.pdf	675037	no	2
			b55788b3d885b946148770d8fb66cd15206bcbcf		

Warnings:

118/175

118

Information:	
Total Files Size (in bytes):	675037
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.	



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/835,018	03/30/2020	Lars Christensen	P006DK.WO.* (87942.0014)	7472
26582	7590	07/27/2021	EXAMINER	
Holland & Hart LLP			TISCHLER, FRANCES	
PO Box 11583				
Salt Lake City, UT 84147				
			ART UNIT	PAPER NUMBER
			1765	
			NOTIFICATION DATE	DELIVERY MODE
			07/27/2021	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):

patentdocket@hollandhart.com

<i>Applicant-Initiated Interview Summary</i>	Application No. 16/835,018	Applicant(s) Christensen et al.		
	Examiner FRANCES TISCHLER	Art Unit 1765	AIA (First Inventor to File) Status Yes	Page 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	Title	Type
FRANCES TISCHLER	Primary Examiner	Telephonic
Steven Avena	Attorney of Record	

Date of Interview: 22 July 2021

Issues Discussed:

Proposed Amendment(s)

Discussed that the amendment requiring that the coextrusion layer "consists" of only the tie layer and the COC of the contact layer seems to differentiate it from Adams who teaches additional layers, but that further consideration and search is needed.

Discussed the need for a Terminal Disclaimer in response to the Office Action in order to expedite prosecution.

Applicant will respond in writing.

/FRANCES TISCHLER/ Primary Examiner, Art Unit 1765	
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: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the 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.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/835,018	03/30/2020	Lars Christensen	P006DK.WO.* (87942.0014)	7472
26582	7590	07/20/2021	EXAMINER	
Holland & Hart LLP			TISCHLER, FRANCES	
PO Box 11583			ART UNIT	PAPER NUMBER
Salt Lake City, UT 84147			1765	
			NOTIFICATION DATE	DELIVERY MODE
			07/20/2021	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):

patentdocket@hollandhart.com

Advisory Action Before the Filing of an Appeal Brief	Application No. 16/835,018	Applicant(s) Christensen et al.	
	Examiner FRANCES TISCHLER	Art Unit 1765	AIA (FITF) Status Yes

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

THE REPLY FILED 14 July 2021 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 ____ 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 Continuation Sheet (See 37CFR 1.116 and 41.33(a)).

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

5. ☐ Applicants 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: PTO-2323, PTO-413.

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: 1-12.

Claim(s) withdrawn from consideration: 13-20.

/FRANCES TISCHLER/ Primary Examiner, Art Unit 1765	
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Continuation of 3 and 12. NOTE:

Applicant has provided new arguments that have not been previously made of record.

Applicant has also provided a new IDS that has not been previously made of the record.

Applicant has not provided the necessary Terminal Disclaimers.

Applicant has also amended claim 1 to recite that the coextrusion layer "consists" of the tie layer and COC of the contact layer, which require further consideration before allowance.

The Examiner was not able to make a definitive determination of the patentability of the claims given Applicant's new arguments, amended claim, and new IDS, based upon the limited time authorized for after-final consideration.

<i>Examiner-Initiated Interview Summary</i>	Application No. 16/835,018	Applicant(s) Christensen et al.		
	Examiner FRANCES TISCHLER	Art Unit 1765	AIA (First Inventor to File) Status Yes	Page 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	Title	Type
FRANCES TISCHLER	Primary Examiner	Telephonic
Steven Avena	Attorney of Record	

Date of Interview: 15 July 2021

Issues Discussed:

Other

The Examiner informed Applicant by voice mail of not being able to make a definite determination of the patentability of the claims based upon the limited update search and additional consideration within the time authorized for the pilot program, given the amendments to claim 1, given that Applicant also provided new arguments that have not been previously made of the record, and given the new IDS, all of which require substantial consideration, and given that no TDs were filed.

/FRANCES TISCHLER/ Primary Examiner, Art Unit 1765	
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.

AFCP 2.0 Decision

Application No.

16/835,018

Applicant(s)

Christensen et al.

Examiner

FRANCES TISCHLER

Art Unit

1765

AIA (FITF) Status

Yes

This is in response to the After Final Consideration Pilot request filed 14 July 2021.

1. **Improper Request** – The AFCP 2.0 request is improper for the following reason(s) and the after final amendment submitted with the request will be treated under pre-pilot procedure.

- ☐ An AFCP 2.0 request form PTO/SB/434 (or equivalent document) was not submitted.
- ☐ A non-broadening amendment to at least one independent claim was not submitted.
- ☐ The request is not the first proper AFCP 2.0 request submitted in response to the most recent final rejection.
- ☐ Other: _____

2. Proper Request

A. After final amendment submitted with the request will not be treated under AFCP 2.0.

The after final amendment cannot be reviewed and a search conducted within the guidelines of the pilot program.

- ☐ The after final amendment will be treated under pre-pilot procedure.

B. Updated search and/or completed additional consideration.

The examiner performed an updated search and/or completed additional consideration of the after final amendment within the time authorized for the pilot program. The result(s) of the updated search and/or completed additional consideration are:

- ☐ 1. All of the rejections in the most recent final Office action are overcome and a Notice of Allowance is issued herewith.
- ☐ 2. The after final amendment would not overcome all of the rejections in the most recent final Office action. See attached interview summary for further details.
- ☒ 3. The after final amendment was reviewed, and it raises a new issue(s). See attached interview summary for further details.
- ☐ 4. The after final amendment raises new issues, but would overcome all of the rejections in the most recent final Office action. A decision on determining allowability could not be made within the guidelines of the pilot. See attached interview summary for further details, including any newly discovered prior art.
- ☐ 5. Other: _____

Examiner Note: Please attach an interview summary when necessary as described above.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

DO NOT ENTER: /F.T./

In re application of:

Christensen et al.

For: A METHOD FOR PROVIDING AN
EXTREME CHEMICAL RESISTANT
FILM, A FILM AND LAMINATE
OBTAINABLE THEREFROM

Application No.: 16/835,018

Filed: March 30, 2020

Docket No.: P006DK.WO.US.01
(87942.0014)

Customer No.: 26582

Confirmation No.: 7472

07/16/2021

Examiner: Frances Tischler

Art Unit: 1765

**AMENDMENT AFTER FINAL W/ AFCP
2.0 REQUEST****CERTIFICATE OF TRANSMISSION**

I hereby certify that this correspondence is being filed
via EFS-Web with the United States Patent and
Trademark Office on: July 14, 2021.

By: / Wendy Nishida /
Wendy Nishida

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

Commissioner:

In response to the final Office Action dated May 24, 2021, please enter the following
amendments and remarks:

Amendments to the Claims begin on page 2.**Remarks** begin on page 5.



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

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Sale Accounting Date:07/15/2021

Sale Item Reference Number
16835018

Effective Date
07/14/2021

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I20217EI51192807	1806	SUBMISSION- INFORMATION DISCLOSURE STMT	\$260.00	Deposit Account

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 16/835,018		Filing Date 03/30/2020		☐ 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), (i), 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	07/14/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))	* 20	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".						/ANNIE C SINGLETON/				
*** 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.

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.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	16/835,018
Filing Date	March 30, 2020
First Named Inventor	Christensen et al.
Art Unit	1765
Examiner Name	Frances Tischler
Docket Number	P006DK.WO.US.01 (87942.0014)

Sheet 1 of 2

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Document Number Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	01	EP 0245921-A2	11-19-1987	International Paper Company	12 pgs.	

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶

Examiner Signature	Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 2.98. 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 2 hours 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 Office, U.S. Patent and Trademark Office, 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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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	16/835,018
Filing Date	March 30, 2020
First Named Inventor	Christensen et al.
Art Unit	1765
Examiner Name	Frances Tischler
Docket Number	P006DK.WO.US.01 (87942.0014)

Sheet	2	of	2
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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	/ Steven A. Avena /	Date (YYYY-MM-DD)	2021-07-14
Name/Print	Steven A. Avena	Registration Number	75,211

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.**



Espacenet

Bibliographic data: EP0245921 (A2) — 1987-11-19

Heat sealable barrier material for improved juice packaging.

Inventor(s): GIBBONS CHARLES E; WHILLOCK ALLAN A ± (GIBBONS, CHARLES E, ; WHILLOCK, ALLAN A)

Applicant(s): INT PAPER CO [US] ± (INTERNATIONAL PAPER COMPANY)

Classification: - **international:** A23L2/42; A23L3/00; B32B27/10; B32B27/12; B32B27/16; B65D5/00; B65D65/40; B65D85/72; (IPC1-7): B32B27/10; B65D5/00
 - **cooperative:** B32B15/085 (US); B32B15/20 (US); B32B27/08 (US); B32B27/10 (EP, KR, US); B32B27/304 (US); B32B27/306 (US); B32B27/32 (US); B32B27/34 (US); B32B27/36 (US); B32B38/0008 (US); B65D5/00 (KR); B65D65/46 (KR); B32B2307/31 (US); B32B2307/7244 (US); B32B2311/24 (US); B32B2323/046 (US); B32B2327/00 (US); B32B2327/06 (US); B32B2329/04 (US); B32B2367/00 (US); B32B2377/00 (US); B32B2439/70 (US); Y10T428/1303 (EP, US); Y10T428/2826 (EP, US); Y10T428/31692 (EP, US); Y10T428/3175 (EP, US); Y10T428/31797 (EP, US); Y10T428/31899 (EP, US); Y10T428/31902 (EP, US); Y10T428/31913 (EP, US); Y10T428/3192 (EP, US)

Application number: EP19870301665 19870225 Global Dossier

Priority number(s): US19860864142 19860516

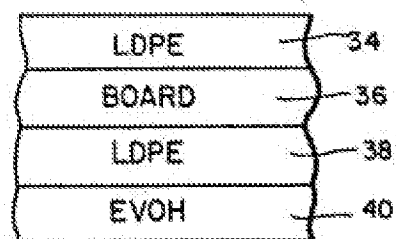
Also published as: EP0245921 (A3) EP0245921 (B1) EP0245921 (B2) AT63278 (T) AU597942 (B2) more

Abstract of EP0245921 (A2)

The present invention relates to an improved container for citrus juices and other liquids. The container utilizes a paperboard barrier laminate (34, 36, 38, 40) for the containment of essential oils and the prevention of losses of Vitamin C. Also disclosed is a process of making the laminate. The laminate makes use of a layer (40) of a heat-

sealable ethylene vinyl alcohol copolymer to enhance the barrier properties of the laminate.

FIG. 5.



(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number:

**0 245 921
A2**

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 87301665.3

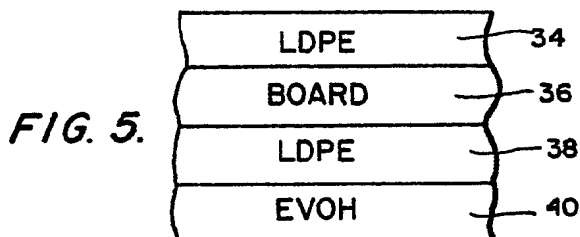
(51) Int. Cl.4: **B65D 5/00 , B32B 27/10**

(22) Date of filing: 25.02.87

(30) Priority: 16.05.86 US 864142

(43) Date of publication of application:
19.11.87 Bulletin 87/47(84) Designated Contracting States:
AT BE CH DE ES FR GB IT LI LU NL SE(71) Applicant: **International Paper Company**
77 West 45th Street
New York New York 10036(US)(72) Inventor: **Gibbons, Charles E.**
6161 Hampton Oaks Drive
Mobile Alabama 36609(US)
Inventor: **Whillock, Allan A.**
3900 Hillcrest Lane
Mobile, Alabama(US)(74) Representative: **Seaborn, George Stephen et al**
c/o Edward Evans & Co. Chancery House
53-64 Chancery Lane
London WC2A 1SD(GB)(54) **heat sealable barrier material for improved juice packaging.**

(57) The present invention relates to an improved container for citrus juices and other liquids. The container utilizes a paperboard barrier laminate (34, 36, 38, 40) for the containment of essential oils and the prevention of losses of Vitamin C. Also disclosed is a process of making the laminate. The laminate makes use of a layer (40) of a heat-sealable ethylene vinyl alcohol copolymer to enhance the barrier properties of the laminate.



EP 0 245 921 A2

HEAT SEALABLE BARRIER MATERIAL FOR IMPROVED JUICE PACKAGING

BACKGROUND OF THE INVENTION

The invention relates to heat-sealable barrier laminates for the containment of essential oils and the prevention of loss of Vitamin C in paperboard cartons, as well as to a process for making such laminates. More particularly, this invention relates to barrier laminates which are comprised of an improved heat-sealable product contact material which does not absorb or transmit flavor or odor ingredients of citrus and other juices.

Heat-sealable low-density polyethylenes are well known to be components of current paperboard citrus juice cartons which provide little barrier to absorption and/or transmission of citrus juice essential flavor/aroma oils. Additionally, it is well known that impermeable materials such as aluminum foil, polar materials such as: polyamides, polyethylene terephthalates, polyvinylidene chlorides, polyvinyl chlorides, etc., and highly crystalline non-polar materials such as high-density polyethylene and polypropylene provide varying degrees of barrier to the absorption and/or transmission of non-polar citrus juice flavor oils such as d-limonene, et al. However, these materials could not be substituted for low density polyethylene since they lacked the requisite heat-sealability over a practical temperature range, necessary FDA clearance for direct contact to foods, stress cracking resistance and cutability during the scoring, and/or die cutting conversion processes. Due to the failures of these impermeable materials, past efforts have concentrated on using a combination of these flavor-oil resistant materials with low density polyethylene as the heat-sealable component.

The existing commercial structure for a paperboard carton for juice and similar products has utilized an easily heat-sealable barrier laminate composed of paperboard sandwiched between two layers of low density polyethylene (LDPE). The LDPE is an inexpensive heat-sealable moisture barrier. The conventional structure falters in that the LDPE layer absorbs the essential oils of the juice after short periods of time causing integrity decay of heat seals, stress cracking of the layer and allows transmission of the essential oils into the paperboard and to the atmosphere. Additionally, the conventional structure provides virtually no barrier resistance to oxygen causing the juice to lose Vitamin C in large amounts.

One other conventional structure adds two additional layers to the structure identified above, namely a foil layer and an additional LDPE layer. The expensive foil layer increases barrier resistance to the flow of oxygen, while the additional LDPE allows for ultimate heat-sealability of the laminate. The improved conventional structure has poor barrier properties relating to the absorption of essential oils and aromas, since the interior contacting layer is still LDPE.

The object of the present invention is to produce an improved juice packaging heat-sealable laminate material which does not absorb or transmit flavor/odor ingredients of citrus and other juices.

SUMMARY OF THE INVENTION

The preferred embodiment of the present invention reveals a heat-sealable barrier laminate providing a substantial barrier to the loss of Vitamin C and an almost complete barrier to the loss of essential flavor oils over the shelf life period of the carton (six weeks) and far beyond the six week period as well. The preferred embodiment comprises from the outer surface to the inner surface contacting the essential oils and/or flavors: an exterior layer of a low density polyethylene, a paperboard substrate, an interior layer of a low density polyethylene and a layer of ethylene vinyl alcohol copolymer (EVOH) coated onto the interior layer of the low density polyethylene, in contact with the juice rendering the laminate heat-sealable.

The cartons constructed of the laminate of the present invention enable significant flavor oil retention of the citrus juice contained, and also significant prevention of loss of Vitamin C, resulting in a significant extension of the shelf life thereof and permits replacement of the costly aluminum foil barrier.

The preferred EVOH is sold under the product name Eval EP resins and is available from Eval Company of America.

The present invention has produced a suitable container which has excellent barrier properties utilizing a laminate which can be heat-sealed with its exterior and interior layers being a non-polar constituent (LDPE) and a polar constituent (EVOH) from front to back. The conventional theories have been that the laminate could not be heat-sealed on conventional apparatus at practical temperatures without having non-polar constituents on its ends. The liquid juice components are insoluble in the polar EVOH material, preventing flavor oil absorption and resulting swelling, stress cracking, and plasticization, heat seal degradation as occurs with LDPE as the contact layer.

The preferred laminate of the present invention not only exhibits significant barrier properties to extend the shelf life of the juice, but the laminate is produced using conventional extrusion equipment.

Stepwise, the paperboard is flame treated both sides, a layer of molten LDPE is placed onto the paperboard substrate by extrusion coating, the newly formed layer of LDPE is then corona discharge treated or flame treated in preparation for heat-sealing later in the process.

Secondly, the web is turned over and a layer of LDPE is extrusion coated onto the other exposed side of the paperboard substrate. This layer is also corona discharge treated or flame treated to facilitate adhesion to a subsequent EVOH layer.

Thirdly, a molten layer of EVOH is extrusion coated onto the interior layer of LDPE. The completed laminate can now be heat-sealed from front to back (LDPE to EVOH) at conventional temperatures (250°F to 500°F).

The newly formed laminate can then be scored, cut into blanks, folded and side-seam heat-sealed thereon for transport.

Once transported, the prepared blanks can be placed onto conventional equipment, such as a PurePak® machine made by Ex-Cell-O. The blanks are heat-sealed at the bottom, filled and heat-sealed at the top by the PurePak® machine to complete the filled carton.

The barrier laminate produced by the present invention not only exhibits excellent barrier properties and can be easily constructed but also meets FDA approval for use in food packaging. Eval Company of America's Eval EP is FDA approved for direct food contact and the preferred EVOH of the invention. Other EVOH's which heat seal at low temperatures (250°F to 500°F) and which can be cut on conventional machinery could also be used as the contacting barrier.

Thus, until the advent of the present invention no suitable containers for the containment of citrus juices have been developed which retain the advantages of using paperboard as the base material and is an FDA approved heat-sealable barrier laminate which is economical and can be formed using conventional extrusion coating equipment.

The present invention described herein is particularly useful as a paperboard laminate employed in the manufacture of citrus juice or other liquid containers. Such containers which make use of a heat-seal for seaming and closing such as folding boxes, square or rectangular containers or cartons, or even cylindrical tubes.

BRIEF DESCRIPTION OF THE DRAWINGS

- FIG. 1 is a cross-sectional elevation of an existing commercial structure of a laminate;
 FIG. 2 is a cross-sectional elevation of an existing commercial structure of a laminate;
 FIG. 3 is a cross-sectional elevation of an existing commercial structure of a laminate;
 FIG. 4 is a cross-sectional elevation of an existing commercial structure of a laminate;
 FIG. 5 is a cross-sectional elevation of the preferred embodiment of the laminate of the present invention;
 FIG. 6 is a cross-sectional elevation of an alternate embodiment of the laminate of the present invention;
 FIG. 7 is a cross-sectional elevation of an alternate embodiment of the laminate of the present invention;
 FIG. 8 is block diagram representing the process for making the preferred embodiment of the laminate of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The existing commercial structure for a paperboard carton for juice and similar products has made use of an easily heat-sealed barrier laminate composed of paperboard 4 (FIG. 1) sandwiched between two layers of low density polyethylene (LDPE) 2, 6. The LDPE is an inexpensive heat-sealable material which acts only to a limited extent as a moisture barrier to prevent loss of essential oils (flavor) and aroma. The problem encountered with conventional laminate structure has been that the essential oils of the juice (namely - D Limonene) has, after short periods of time, been absorbed into the LDPE layer causing heat seal decay, stress cracking, and swelling while stripping the juice of the essential oils. Additionally, the conventional structure (FIG 1) provides virtually no barrier resistance to oxygen which causes the juice to lose Vitamin C in great quantities after a relatively short period of time. To illustrate, the conventional paperboard $\frac{1}{2}$ gallon juice carton will lose 60.5% of its essential oil (D-Limonene) and 84.5% of its Vitamin C content in a storage period of six weeks (SEE TABLE 1).

One conventional existing paperboard carton (FIG. 2) utilizes two additional layers in addition to the layers disclosed in FIG. 1 to add greater barrier resistance to the passage of oxygen and resultant loss of Vitamin C. Aluminum foil 14 has been added to the laminate structure to increase the barrier's resistance to the flow of oxygen. The additional layer of LDPE 16 is needed to allow the laminate to be heat-sealed from front to back with the exterior LDPE 8 layer. The structure of the barrier laminate (FIG. 2) has poor barrier properties relating to the absorption of essential oils and aromas, since the heat-sealable contacting layer is still low density polyethylene. The shelf storage life of the juice carton made up of the barrier laminate of FIG. 2 still exhibits a percentage loss of essential oils (D-Limonene) of 35.5%, while greatly improving its barrier properties with respect to the percentage loss of Vitamin C, 24% (See Table 1). The addition of the foil layer allows the laminate to exhibit excellent O₂ barrier properties. Although, the use of a foil layer is extremely beneficial, the increased expense makes the use of foil economically less desirable.

FIGS. 3 and 4 disclose structures of barrier laminates described in U.S. Patent 4,513,036. FIG. 3 discloses a barrier laminate comprising a sandwich of LDPE 18-paperboard 20-High Density Polyethylene (HDPE) 22-LDPE 24. The laminate disclosed exhibits large losses of essential oils during its shelf life of six weeks, namely 60.5%, while also exhibiting large losses of Vitamin C during the six week period 87% (see Table 1). The economics and ease of fabrication of the laminates of FIG. 3 are outweighed by the poor barrier properties exhibited.

FIG. 4 discloses the preferred embodiment of U.S. Patent 4,513,036, namely a barrier laminate comprising LDPE 26-Paperboard 28-Polypropylene 30-LDPE 32. The additional polypropylene layer 30 adds to the barrier properties at relatively low additional costs. The barrier properties still are extremely deficient in its resistance to the passage of oxygen and its loss of Vitamin C, namely 71% after six weeks. The polypropylene laminate structure loses 39.5% of its essential oils (D-Limonene) after six weeks (see Table 1).

Both embodiments disclosed in the patent cited above do not adequately preserve the flavor/aroma and Vitamin C content of the juice. The structure of the existing commercial constructions have all faced the same problem due to the necessity for heat sealing the seams and closures while forming the carton blank and while filling the cartons with juice or the like. The necessity of forming a heat seal from the front to the back of the laminate has resulted in the use of an exterior layer of LDPE and an interior layer of LDPE, both non-polar compounds which exhibit excellent heat-sealing characteristics to one another (see FIGS. 1-4).

Referring to FIG. 5, the preferred embodiment of the laminate of the present invention is shown as comprising a paperboard substrate 36 which is most suitably high-grade paperboard stock, for example, 282 lb. Milk Carton Board, to which is applied on both sides a coating of low density polyethylene (LDPE) 34, 38 in a coating weight ranging from about 5 to about 40 pounds per ream. Any commercial extrusion coating grade LDPE is suitable for use herein. On the back or interior portion of the laminate, namely onto LDPE layer 38 is applied a layer of EVOH 40. The EVOH being a heat-sealable layer composed of Eval Company of America's Eval EP resins.

Referring now to FIG. 8, wherein a block diagram discloses the method of forming the heat-sealable barrier laminate of Figure 5.

The laminate can be easily fabricated. In Step A, the paperboard is flame treated two sides. Step B, a molten layer of the LDPE 34 is extrusion coated onto the paperboard substrate 36. Step C, the LDPE layer 34 is corona discharge or flame treated in preparation for subsequent heat-sealing Step D, the web is turned over to facilitate Step E, which has a layer of molten LDPE 38 extrusion coated onto the paperboard substrate 36. Step F, LDPE layer 38 is corona discharge treated to facilitate the adhesion of a subsequent EVOH coating, and lastly, Step G, a layer of EVOH 40 is extrusion coated onto LDPE layer 38 to complete the sandwich.

Referring now to FIG. 6, an alternate embodiment of the laminate of the present invention is shown. The embodiment adds an additional barrier layer which not only provides total containment of flavor oils, but also provides significant containment of Vitamin C. In this alternate embodiment, the paperboard substrate 44, is extrusion coated on the external surface thereof with a coating of heat-sealable LDPE 42. On the internal surface of the paperboard substrate 44 is applied a coating of LDPE 46. Overlying the LDPE web 46 is a layer of an oxygen barrier material 48. The oxygen barrier material can be any of the following group: foil, polyacrylonitrile or its copolymers, polyethylene terephthalate or its copolymers, polyvinylidene chloride or its copolymers, polyamide or its copolymers, polyvinyl alcohols or its copolymers, polyvinyl chloride or its copolymers or an additional layer of EVOH. Overlying the barrier material is a layer of heat-sealable EVOH 50 which will ultimately form the internal surface of the container constructed therefrom.

To enhance the adhesion of the additional barrier layer 48 to the LDPE layer 46 and the EVOH layer 50, additional tie layers 47, 49 can be interposed therebetween. Adhesives which are extrudable or coextrudable, such as Dupont's CXA series or recent vintage Plexars® from Norchem are suitable choices. When using ethylene vinyl alcohol (EVOH) as both an oxygen barrier 48 and a heat seal layer 50 in FIG. 6, tie layer 47 can be eliminated by coextrusion coating an EVOH 48/tie layer 49/EVOH 50 composite extrudate onto LDPE layer 46 which has been previously flame or corona treated.

FIG. 7 reflects an embodiment similar to that of FIG. 5. Replacing the outer layer of a heat-sealable LDPE 34, is a blend layer 52 of EVOH and LDPE. The blend is made up of between five (5) to thirty (30) percent EVOH and the rest being LDPE. The laminate is comprised from outside to inside: LDPE/EVOH Blend 52-PAPERBOARD SUBSTRATE 54-LDPE 56-EVOH 58. The advantage of the LDPE/EVOH blend layer is that it eliminates the need for extensive surface treatment prior to heat sealing.

Although specific coating techniques have been described, any appropriate technique for applying the layers onto the paperboard substrate can be suitably employed, such as extrusion, coextrusion, or adhesive lamination or single and/or multilayer films to paperboard to achieve the stated inventions of this patent.

The unique barrier effect provided by the laminate of the present invention to the % loss of essential oils and to the % loss of Vitamin C is clearly demonstrated by the following example outlined in Table 1.

Standard $\frac{1}{2}$ gallon juice containers were prepared and filled with juice. A typical essential oil in the juice was d-limonene. The filled cartons were stored for a test period of six weeks after which the juice was analyzed to determine the percentage loss by weight of the essential oil d-limonene and the percentage loss by weight of Vitamin C.

The six cartons tested were those shown in FIGS. 1-6 and described herein.

TABLE 1

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Test Sample 1/2 Gallon Juice Container	% Loss of Essential Oil	% Loss of Vitamin C
LDPE-BOARD-LDPE (FIG. 1)	60.5	84
LDPE-BOARD-LDPE-FOIL- LDPE (FIG. 2)	35.5	24
LDPE-BOARD-HDPE-LDPE (FIG. 3)	60.5	87
LDPE-BOARD-POLYPROPYLENE- LDPE (FIG. 4)	39.5	71
LDPE-BOARD-LDPE-EVOH (FIG. 5)	0*	30
LDPE-BOARD-LDPE-EVOH- Tie Layer-EVOH (FIG. 6 with tie layer)	0*	24

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55 *Less than one percent

It can be clearly seen that the container prepared from a laminate of the present invention provides an almost complete barrier to the loss of essential oils far greater than has been present in existing structures comprising LDPE heat seal layers. Additionally, the oxygen passage or percentage loss of Vitamin C has been greatly reduced over all prior laminates not containing aluminum foil.

The effectiveness of the laminate of the present invention as a barrier to migration of essential oils and flavors, as well as a barrier to a loss of Vitamin C permits a significant extension of shelf life of containers constructed therefrom.

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Claims

1. A container for liquids containing essential oils and/or flavors, said container constructed from a laminate comprising:
 - a) a paperboard substrate;
 - b) an outer layer of 1) a heat-sealable low density polyethylene polymer or 2) a blend of low density polyethylene polymer and ethylene vinyl alcohol copolymer coated on said outer surface of said paperboard substrate;
 - c) an inner layer of a heat-sealable low density polyethylene polymer coated on said inner surface of said paperboard substrate; and
 - d) a layer of a heat-sealable ethylene vinyl alcohol copolymer which can heat-seal on conventional equipment at temperatures ranging from 250°F - 500°F coated on said outer surface of said inner layer of said polyethylene polymer.
2. The container as claimed in claim 1 wherein said outer layer is a low density polyethylene polymer which is corona discharge treated to enhance heat-sealability of said laminate.
3. The container as claimed in claim 2 wherein said outer layer of a low density polyethylene polymer is flame treated to enhance heat-sealability of said laminate.
4. The container as claimed in claim 2 wherein said surface of said inner layer of said heat-sealable low density polyethylene polymer is corona discharge treated to enhance adhesion of said heat-sealable EVOH layer.
5. The container as claimed in claim 3 wherein said surface of said inner layer of said heat-sealable low density polyethylene polymer is flame treated to enhance adhesion of said heat-sealable EVOH layer.
6. The container according to claim 1 characterized by the fact that the outer layer b) is a heat-sealable low density polyethylene polymer coated on said outer surface of said paperboard substrate, and additionally comprises:
 - an oxygen barrier material layer coated on said outer surface of said inner layer of said polyethylene polymer;
 - a tie layer of a heat-sealable low density polyethylene polymer coated on said outer surface of said oxygen barrier materials; and
 - a heat-sealable layer of an ethylene vinyl alcohol copolymer coated on said outer surface of said tie layer.
7. The container as claimed in claim 6 wherein said oxygen barrier material layer is an ethylene vinyl alcohol copolymer.
8. The container as claimed in claim 6 wherein said oxygen barrier material layer is a polyvinyl alcohol.
9. The container as claimed in claim 6 wherein said oxygen barrier material layer is a layer of aluminum foil.
10. The container as claimed in claim 6 wherein said oxygen barrier material layer is a layer of polyethylene terephthalate.
11. The container as claimed in claim 6 wherein said oxygen barrier material layer is a layer of glycol modified polyethylene terephthalate.
12. The container as claimed in claim 6 wherein said oxygen barrier material layer is a layer of acid modified polyethylene terephthalate.
13. The container as claimed in claim 6 wherein said oxygen barrier material layer is a layer of polyvinylidene chloride.
14. The container as claimed in claim 6 wherein said oxygen barrier material layer is a layer of vinylidene chloride copolymer.
15. The container as claimed in claim 6 wherein said oxygen barrier material layer is a layer of polyvinyl chloride polymer.

16. The container as claimed in claim 6 wherein said oxygen barrier material layer is a layer of vinyl chloride copolymer.

17. The container as claimed in claim 6 wherein said oxygen barrier material layer is a layer of polyamide.

5 18. The container as claimed in claim 6 wherein said oxygen barrier material layer is a layer of polyamide copolymers.

19. The container as claimed in claim 6 wherein said outer layer of said low density polyethylene polymer is corona discharge treated to enhance heat-sealability of said laminate.

20. The container as claimed in claim 6 wherein said outer layer of said low density polyethylene polymer is flame treated to enhance heat-sealability of said laminate.

21. The container as claimed in claim 19 wherein said inner layer of said low-density polyethylene polymer is corona discharge treated to enhance adhesion of said subsequent heat-sealable EVOH coating.

22. The container is claimed in claim 20 wherein said inner layer of said low-density polyethylene polymer is flame treated to enhance adhesion of said subsequent heat-sealable EVOH coating.

15 23. The container according to claim 1 characterized by the fact that the outer layer b) is a heat-sealable ethylene vinyl alcohol copolymer/low density polyethylene blend coated on said outer surface of said paperboard substrate.

24. The container as claimed in claim 23 wherein said surface of said inner layer of said heat-sealable low density polyethylene polymer is corona discharge treated to enhance adhesion of said heat-sealable EVOH layer.

25. The container as claimed in claim 23 wherein said surface of said inner layer of said heat-sealable low density polyethylene polymer is flame treated to enhance adhesion of said heat-sealable EVOH layer.

26. A process for improving the resistance of paperboard to the migration of essential oils and/or flavorings, said process comprising the steps of:

25 a) extrusion coating an outer layer of a low density polyethylene polymer onto said outer surface of said paperboard;

b) corona discharge treating or flame treating said outer layer of low density polyethylene polymer;

c) extrusion coating an inner layer of a low density polyethylene polymer onto said inner surface of said paperboard;

30 d) corona discharge treating or flame treating said inner layer of low density polyethylene polymer; and

e) extrusion coating a layer of 1) a heat-sealable ethylene vinyl alcohol copolymer or 2) coextrusion coating a three layer (ethylene vinyl alcohol/tie layer/ethylene vinyl alcohol) composite extrudate onto said surface of said inner layer of low density polyethylene polymer.

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FIG. 1.

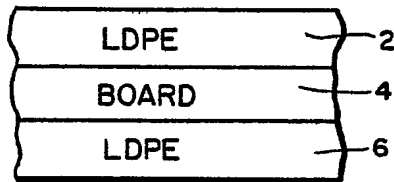
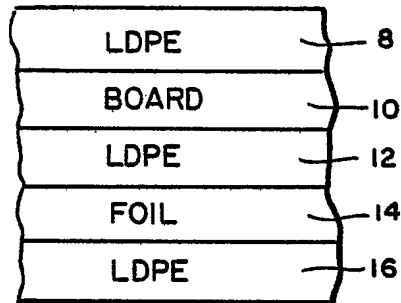
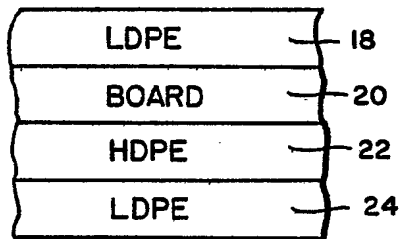


FIG. 2.



EXISTING
COMMERCIAL
STRUCTURES

FIG. 3.



CHAMPION
PATENT

FIG. 4.

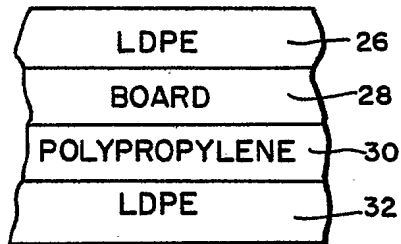


FIG. 6.

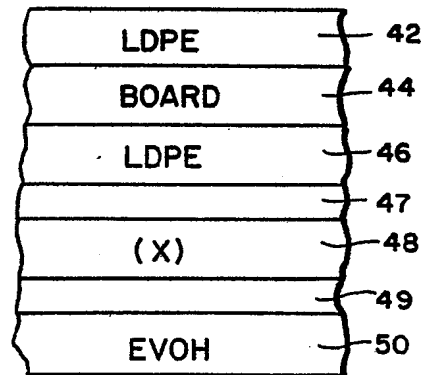


FIG. 5.

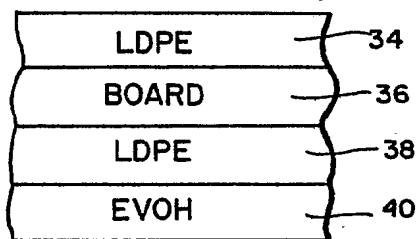
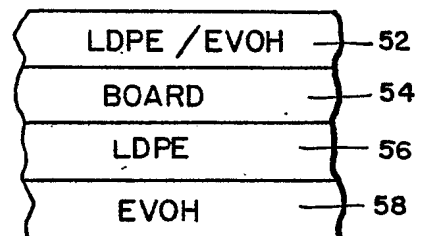
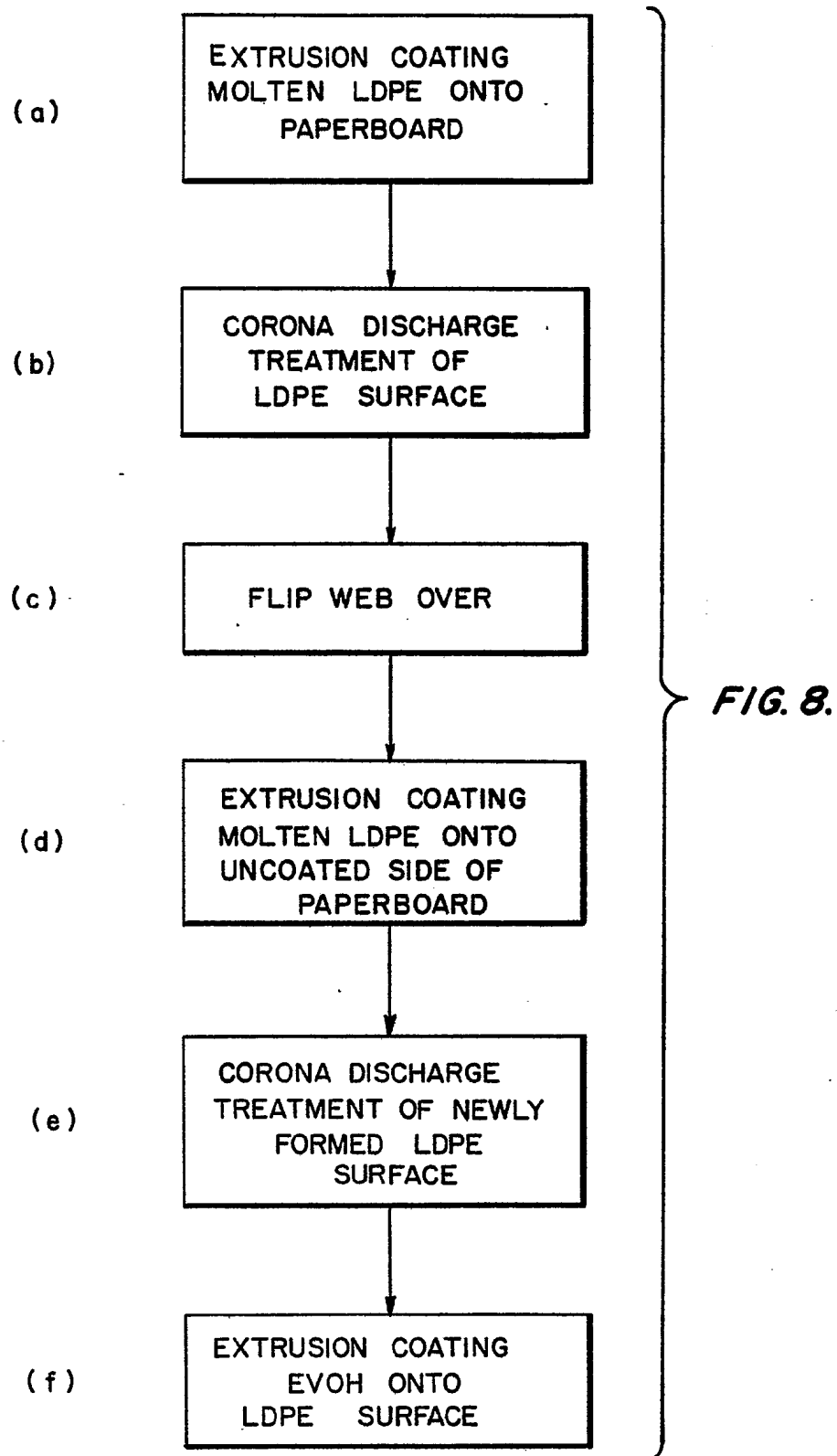


FIG. 7.





Electronic Acknowledgement Receipt

EFS ID:	43245348
Application Number:	16835018
International Application Number:	
Confirmation Number:	7472
Title of Invention:	METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM
First Named Inventor/Applicant Name:	Lars Christensen
Customer Number:	26582
Filer:	Steven Anthony Avena/Wendy Nishida
Filer Authorized By:	Steven Anthony Avena
Attorney Docket Number:	P006DK.WO.* (87942.0014)
Receipt Date:	14-JUL-2021
Filing Date:	30-MAR-2020
Time Stamp:	14:40:49
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		P006DanapakUS01.pdf	1188632	yes	31
			5fbce44b88a27ddce28321253f87a03d05769a6c		

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	After Final Consideration Program Request	1	1
	Response After Final Action	2	2
	Claims	3	5
	Applicant Arguments/Remarks Made in an Amendment	6	15
	Transmittal Letter	16	17
	Information Disclosure Statement (IDS) Form (SB08)	18	19
	Foreign Reference	20	31
Warnings:			
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Total Files Size (in bytes):		1188632	
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.			

CERTIFICATION AND REQUEST FOR CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0		
Practitioner Docket No.: P006DK.WO.US.01 (87942.0014)	Application No.: 16/835,018	Filing Date: March 30, 2020
First Named Inventor: Christensen et al.	Title: A METHOD FOR PROVIDING AN EXTREME CHEMICAL RESISTANT FILM, A FILM AND LAMINATE OBTAINABLE THEREFROM	
APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0 (AFCP 2.0) OF THE ACCOMPANYING RESPONSE UNDER 37 CFR 1.116. 1. The above-identified application is (i) an original utility, plant, or design nonprovisional application filed under 35 U.S.C. 111(a) [a continuing application (<i>e.g.</i>, a continuation or divisional application) is filed under 35 U.S.C. 111(a) and is eligible under (i)], or (ii) an international application that has entered the national stage in compliance with 35 U.S.C. 371(c). 2. The above-identified application contains an outstanding final rejection. 3. Submitted herewith is a response under 37 CFR 1.116 to the outstanding final rejection. The response includes an amendment to at least one independent claim, and the amendment does not broaden the scope of the independent claim in any aspect. 4. This certification and request for consideration under AFCP 2.0 is the only AFCP 2.0 certification and request filed in response to the outstanding final rejection. 5. Applicant is willing and available to participate in any interview requested by the examiner concerning the present response. 6. This certification and request is being filed electronically using the Office's electronic filing system (EFS-Web). 7. Any fees that would be necessary consistent with current practice concerning responses after final rejection under 37 CFR 1.116, <i>e.g.</i>, extension of time fees, are being concurrently filed herewith. [There is no additional fee required to request consideration under AFCP 2.0.] 8. By filing this certification and request, applicant acknowledges the following: • Reissue applications and reexamination proceedings are not eligible to participate in AFCP 2.0. • The examiner will verify that the AFCP 2.0 submission is compliant, <i>i.e.</i>, that the requirements of the program have been met (see items 1 to 7 above). For compliant submissions: ○ The examiner will review the response under 37 CFR 1.116 to determine if additional search and/or consideration (i) is necessitated by the amendment and (ii) could be completed within the time allotted under AFCP 2.0. If additional search and/or consideration is required but cannot be completed within the allotted time, the examiner will process the submission consistent with current practice concerning responses after final rejection under 37 CFR 1.116, <i>e.g.</i>, by mailing an advisory action. ○ If the examiner determines that the amendment does not necessitate additional search and/or consideration, or if the examiner determines that additional search and/or consideration is required and could be completed within the allotted time, then the examiner will consider whether the amendment places the application in condition for allowance (after completing the additional search and/or consideration, if required). If the examiner determines that the amendment does not place the application in condition for allowance, then the examiner will contact the applicant and request an interview. ▪ The interview will be conducted by the examiner, and if the examiner does not have negotiation authority, a primary examiner and/or supervisory patent examiner will also participate. ▪ If the applicant declines the interview, or if the interview cannot be scheduled within ten (10) calendar days from the date that the examiner first contacts the applicant, then the examiner will proceed consistent with current practice concerning responses after final rejection under 37 CFR 1.116.		
Signature / Steven A. Avena /	Date July 14, 2021	
Name (Print/Typed) Steven A. Avena	Practitioner Registration No. 75,211	
Note: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.		
☐ * Total of _____ forms are submitted.		

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Christensen et al.

For: A METHOD FOR PROVIDING AN
EXTREME CHEMICAL RESISTANT
FILM, A FILM AND LAMINATE
OBTAINABLE THEREFROM

Application No.: 16/835,018

Filed: March 30, 2020

Docket No.: P006DK.WO.US.01
(87942.0014)

Customer No.: 26582

Confirmation No.: 7472

Examiner: Frances Tischler

Art Unit: 1765

**AMENDMENT AFTER FINAL W/ AFCP
2.0 REQUEST****CERTIFICATE OF TRANSMISSION**

I hereby certify that this correspondence is being filed
via EFS-Web with the United States Patent and
Trademark Office on: July 14, 2021.

By: / Wendy Nishida /
Wendy Nishida

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

Commissioner:

In response to the final Office Action dated May 24, 2021, please enter the following
amendments and remarks:

Amendments to the Claims begin on page 2.**Remarks** begin on page 5.

Amendments to the Claims

Please enter the following amendments to the claims:

1. (Currently Amended) A method for providing a film, said method comprising:
providing a base layer, wherein the base layer is resistant to one or more of water or oxygen;
coextruding a tie layer and a contact layer **to provide a coextrusion layer**, wherein the contact layer consists of a cycloolefin copolymer (COC) ~~to provide a coextrusion layer~~;
coating the coextrusion layer **consisting of the tie layer and the COC of the contact layer** directly to the base layer; and
allowing the coextrusion layer coated to the base layer to adhere to form the film, ~~wherein the film comprises the tie layer and the contact layer formed as a coextrusion layer coated to the base layer~~,
wherein the tie layer comprises one or more layers, and wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m².
2. (Original) The method according to claim 1, wherein a melting point of the tie layer differs from a melting point of COC by 30°C or less.
3. (Original) The method according to claim 2, wherein the melting point of the tie layer differs from the melting point of COC by a value in the range of 5–15°C.
4. (Previously Presented) The method according to claim 1, wherein the contact layer has a loading in the range of 4 to 20 g/m².
5. (Previously Presented) The method according to claim 1, wherein a loading of an entirety of the tie layer is in the range of 7 to 20 g/m².
6. (Previously Presented) A method according to claim 1, wherein a loading of at least a portion of the tie layer is in the range of 7 to 20 g/m².

7. (Previously Presented) The method according to claim 1, wherein the one or more layers of the tie layer comprises a plurality of layers, and wherein a loading of the plurality of layers is in the range of 7 to 20 g/m².

8. (Original) The method according to claim 1, wherein the one or more layers of the tie layer consists of two layers.

9. (Original) The method according to claim 1, wherein coating the coextrusion layer to the base layer comprises performing a coextrusion coating.

10. (Original) The method according to claim 1, wherein at least one of the one or more layers of the tie layer comprises an acrylic acid layer or a polyethylene layer.

11. (Original) The method according to claim 1, wherein the one or more layers of the tie layer comprises an acrylic acid layer and a polyethylene layer.

12. (Original) The method according to claim 11, wherein the acrylic acid layer comprises ethylene acrylic acid.

13. (Withdrawn) A film comprising:
a base layer that is resistant to one or more of water or oxygen; and
a coextrusion layer, said coextrusion layer comprising a tie layer and a contact layer, said tie layer being positioned in between the base layer and the contact layer;
wherein the tie layer comprises one or more layers, and wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²;
wherein the contact layer comprises a cycloolefin copolymer (COC).

14. (Withdrawn) The film according to claim 13, wherein a melting point of the tie layer differs from a melting point of COC by 30°C or less.

15. (Withdrawn) The film according to claim 13, wherein the melting point of the tie layer differs from the melting point of COC by a value in the range of 5–15°C.

16. (Withdrawn) The film according to claim 13, wherein a loading of an entirety of the tie layer is in the range of 7 to 20 g/m².

17. (Withdrawn) The film according to claim 13, wherein a loading of at least a portion of the tie layer is in the range of 7 to 20 g/m².

18. (Withdrawn) The film according to claim 12, wherein the coextrusion layer is coextrusion coated to the base layer.

19. (Withdrawn) The film according to claim 12, wherein the tie layer comprises an acrylic acid layer and a polyethylene layer.

20. (Withdrawn) The film layer according to claim 18, wherein the acrylic acid layer comprises ethylene acid.

REMARKS

Status of the Claims

Before this Amendment, claims 1–12 were present for examination and claims 13–20 were previously withdrawn from consideration. In this Amendment: claim 1 is amended; no claims are canceled; and no new claims are added. Therefore, claims 1–12 are present for examination, and claim 1 is the independent claim. Support for the amendments to the claims may be found throughout the Specification as filed including at least at Paragraphs [0040] and [0116], as well as Figures 1 and 2. No new matter is added with these amendments.

In the final Office Action dated May 24, 2021 (“Office Action”): claims 1–12 were rejected under 35 U.S.C. § 112(b) as being indefinite; claims 1–12 were rejected under 35 U.S.C. § 103 over U.S. Patent Publication No. 2005/0037162 to Adams (“Adams”); claims 1–12 were rejected under 35 U.S.C. § 103 over U.S. Patent No. 6,120,860 to Bowen et al. (“Bowen”) and U.S. Patent Publication No. 2005/0037162 to Adams (“Adams”); claims 1–12 were rejected for non-statutory double patenting over U.S. Patent No. 16,425,067 to Johansen et al. (“Johansen”); and claims 1–12 were rejected for non-statutory double patenting over U.S. Patent No. 16,780,999 to Gu et al. (“Gu”). Applicant respectfully requests reconsideration.

After Final Consideration Pilot 2.0 (AFCP 2.0)

Applicant respectfully submits that the above amendments to the claims place the application in condition for allowance. Further, the amendments can be determined to place the application in condition for allowance with only a limited amount of further searching or consideration. Therefore, Applicant requests that the Office consider these amendments under the AFCP 2.0. If the Office declines the request to consider this response under the AFCP 2.0, Applicant respectfully requests that the Office notify Applicant of this decision.

Non-Statutory Double Patenting

It appears that the Office Action incorrectly listed U.S. Patent Application No. 16,780,999 to Gu et al. (“Gu”) instead of U.S. Patent Application No. 15,780,999 to Christensen et al. (“Christensen”). Without conceding the merits of the rejection—and solely to expedite prosecution—Applicant has addressed the rejection in view of Christensen. The Office

Action rejected claims 1–12 on the ground of non-statutory obviousness-type double patenting over claims 1–20 of Johansen and claims 1–36 Christensen. *See* Office Action, pp. 9 and 10. The Office Action states that the filing of a terminal disclaimer would overcome the double patenting rejection. *See id.*, p. 8.

Applicant respectfully requests that the double patenting rejection be held in abeyance based on the present claim amendments and until the claims of the present application are otherwise deemed by the Office to be in condition for allowance. At such time, Applicant requests that the Office revisit the merits of this rejection and, if necessary, Applicant can evaluate providing an appropriate terminal disclaimer.

35 U.S.C. § 112(b)

The Office Action rejected claims 1–12 under 35 U.S.C. § 112(b) as being allegedly indefinite.

Regarding claim 1, the Office Action alleges that “it is unclear what is being claimed as directly coating the base layer.” *See* Office Action, p. 3. Without conceding the merits of the rejection of independent claim 1 under 35 U.S.C. § 112(b)—and solely to expedite prosecution—Applicant has amended independent claim 1. For example, independent claim 1 has been amended to recite, in part, “coextruding a tie layer and a contact layer to provide a coextrusion layer, wherein the contact layer consists of a cycloolefin copolymer (COC)” and “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer.”

Accordingly, Applicant requests that the rejection of claims 1–12 under 35 U.S.C. § 112(b) be withdrawn.

35 U.S.C. § 102 & § 103

The Office Action rejected claims 1–12 under 35 U.S.C. § 102 over Adams or alternatively, under 35 U.S.C. § 103 over Adams. The Office Action further rejected claims 1–12 under 35 U.S.C. § 103 over the stated combinations of Adams and Bowen.

Factual findings made by the Office are the “necessary underpinnings to establish obviousness.” MPEP § 2141(II). The Office must set forth “the relevant teachings of the prior art

relied upon.” MPEP § 2142. In *KSR International Co. v. Teleflex Inc.*, the Supreme Court noted that the analysis supporting a rejection under 35 U.S.C. § 103 must be made explicit. See 550 U.S. 398, 418 (2007); MPEP § 2142. “[O]bviousness [also] requires a suggestion of all limitations in a claim.” *In re Wada and Murphy*, Appeal 2007-3733 (citing *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003)).

Independent Claim 1

Without conceding the merits of the rejection of independent claim 1 under 35 U.S.C. § 102 and § 103—and solely to expedite prosecution—Applicant has amended independent claim 1. For example, independent claim 1 has been amended to recite, in part, “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer.”

35 U.S.C. § 102

Specifically, Adams does not disclose “coating ***the coextrusion layer consisting of the tie layer and the COC*** of the contact layer directly to the base layer,” as recited in amended independent claim 1 (emphasis added).

Adams is generally directed to “a laminate structure having improved resistance to the migration of essential oils, aromas and flavors and improved oxygen barriers characteristics for beverage packing.” Adams, Abstract. At the portions cited by the Office Action, Adams describes “suitable polyolefins for use in sublayers include, but are not limited to, LDPE, HDPE, LLDPE, polypropylene, cyclic olefin copolymers (COC), and blends thereof.” *Id.*, ¶ [0023]. With reference to FIG. 3, Adams describes that “the laminate structure of FIG. 3 differs from the structure of FIG. 2 in that there is applied directly onto the tie layer with or without filler 19, an additional layer or layers containing filler 20 onto which layer(s) 20 an interior layer or food contact layer without filler 21 is applied.” *Id.*, ¶ [0031]. Adams further describes that “applying the tie layer and other layers can be achieved by either coextrusion or by standard lamination or extrusion lamination processes.” *Id.*, ¶ [0028]. However, coextruding the tie layer 19, a food contact layer 21, ***and*** additional layer or layers of filler 20 is not the same as a “coextrusion layer ***consisting of*** the tie layer and the COC of the contact layer,” as recited in amended independent claim 1 (emphasis added). Rather, Adams describes that “that there is applied directly onto the

tie layer with or without filler 19, an additional layer or layers containing filler 20.” *Id.*, ¶ [0031]. Therefore, Adams does not disclose “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer,” as recited in amended independent claim 1.

In addition, Adams does not disclose “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer ***directly to*** the base layer,” as recited in amended independent claim 1 (emphasis added). As discussed above, Adams describes that “there is applied directly onto the tie layer with or without filler 19, an additional layer or layers containing filler 20 onto which layer(s) 20 an interior layer or food contact layer without filler 21 is applied.” *Id.*, ¶ [0031]. Adams further describes that “a tie layer 13 with or without filler is applied adjacent the barrier layer 12.” *Id.*, ¶ [0030]. However, applying additional layer(s) ***containing filler*** to the tie layer is not the same as “coating the coextrusion layer ***consisting of the tie layer and the COC of the contact layer directly to*** the base layer,” as recited in amended independent claim 1 (emphasis added). That is, Adams describes a method for applying the tie layer to the base layer and applying the additional layer(s) containing filler to the tie layer. However, as discussed above, Adams does not disclose “the coextrusion layer consisting of the tie layer and the COC.” It therefore follows that Adams does not disclose coating the coextrusion layer consisting of the tie layer and the COC of the contact layer ***directly to*** the base layer,” as recited in amended independent claim 1 (emphasis added).

Further, Adams does not disclose “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1. The Office Action concedes, and Applicant agrees, that Adams is silent regarding the loading range values of the layers. *See* Office Action, p. 4.

Instead the Office Action states that “since the references disclose the claimed process of making the film and the claimed layers comprising COC and EAA, their loading and melting point values are inherently the same as claimed.” *Id.* The Office Action, however, does not provide explicit analysis to support why the features of independent claim 1 can be ignored, let alone establish (or even argue) that the loading range values are inherently the same as claimed.

Applicant submits that the assertion that the loading range values are inherently the same as claimed is inapplicable in the current application.

The Office bears the initial burden to develop reasons supporting a reliance on inherency. *See MPEP* 2112 (IV). To satisfy this burden, the Office must identify some basis or articulate some reasoning at least tending to show that allegedly inherent subject matter inevitability flows from cited art (e.g., Adams). Indeed, the MPEP expressly instructs that “[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.”

However, the Office Action fails to include rationale or evidence at least tending to show that the feature of the loading range values can be inherently the same as claimed. In addition, because Adams does not disclose all the features of amended claim 1, the loading range values cannot be inherently the same as claimed. Thus, for at least the foregoing reasons, the assertion that the loading range values are inherently the same as claimed is inapplicable in the current application. Accordingly, the Office Action has failed to establish a *prima facie* case of obviousness for the claimed loading range values in view of Adams.

In addition, because Adams teaches away from such loading range values, the loading range values cannot be inherently the same as claimed. In one example, Adams describes that the tie layer includes a target coating weight of 14 lbs/3,000 ft². *See* Adams, ¶ [0037]. That is, Adams describes a target coating weight of a tie layer to be about 70 g/m². Adams further describes that “the LDPE layer was extrusion coated on the paperboard[, and] the polyamide and tie layer were then deposited as a coextrusion coating to the paperboard and the polyolefin containing filler [i.e., the food contact layer], then applied over the tie layer.” *Id.*, ¶ [0037]. However, the tie layer that includes a target coating weight of 14 lbs/3,000 ft² is not the same as “the coextrusion layer consisting of the tie layer and the COC of the contact layer,” as recited in independent claim 1. It therefore follows that Adams does not disclose “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1. Rather, because Adams is directed towards a target coating weight of a tie layer greater than a loading in the range of 7 to 20 g/m², Adams teaches away from such loading

range values. That is, Adams discloses a target coating weight different than the claimed loading value of the application.

In other examples, Adams describes in structures E., F., and G. that the outer most polyolefin layer is without filler, but all examples then have an adjacent polyolefin layer with filler. Furthermore, the tie layer and the outermost polyolefin layer are not coextruded and coated to a barrier layer. *See id.* at ¶ [0034]. Therefore Adams does not disclose “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer” much less “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1. Accordingly, Adams does not disclose “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1, nor are the target coating weight values of Adams inherently the same as the loading range values as claimed.

Therefore, for at least these reasons, amended independent claim 1 is allowable over Adams.

Accordingly, Applicant requests that the rejection of independent claim 1 under 35 U.S.C. § 102 be withdrawn.

35 U.S.C. § 103

In addition, Adams and Bowen—alone or in any combination—do not teach or suggest “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer,” as recited in amended independent claim 1.

Bowen is generally directed to “multilayer film structures and packages.” Bowen, Abstract. At the portions cited by the Office Action, Bowen describes “a tie can be between the flexible barrier material and the sealant.” *Id.*, col. 4, ll. 43-44. Bowen further describes that “EVA/tie/nylon/tie/EVA or, more generally, sealant/tie/nylon/tie/sealant . . . can be formed as a coextrusion which is then adhered to the second layer element.” *Id.*, col. 4, ll. 47-50. However, the coextrusion does not include a cycloolefin copolymer (COC) much less “coating the coextrusion layer **consisting of** the tie layer and the COC of the contact layer directly to the base layer,” as recited in amended independent claim 1 (emphasis added). Therefore, Bowen does not

teach or suggest “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer,” as recited in amended independent claim 1, nor does the Office Action allege otherwise.

Adams fails to cure the deficiencies of Bowen. As discussed above, Adams does not disclose “coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer,” as recited in amended independent claim 1.

Further, Adams and Bowen—alone or in any combination—do not teach or suggest “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1. The Office Action concedes, and Applicant agrees, that Bowen in view of Adams is silent regarding the loading range values of the layers. *See* Office Action, p. 6.

Instead the Office Action states that “since the references disclose the claimed process of making the film and the claimed layers comprising COC and EAA, their loading and melting point values are inherently the same as claimed.” *Id.* The Office Action, however, does not provide explicit analysis to support why the features of independent claim 1 can be ignored, let alone establish (or even argue) that the loading range values are inherently the same as claimed. Applicant submits that the assertion that the loading range values are inherently the same as claimed is inapplicable in the current application.

The Office bears the initial burden to develop reasons supporting a reliance on inherency. *See MPEP* 2112 (IV). To satisfy this burden, the Office must identify some basis or articulate some reasoning at least tending to show that allegedly inherent subject matter inevitability flows from cited art (e.g., Adams and Bowen). Indeed, the MPEP expressly instructs that “[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.”

However, Office Action fails to include rationale or evidence at least tending to show that the feature of the loading range values can be inherently the same as claimed. In addition, because Adams and Bowens does not teach or suggest all the features of amended claim 1, the loading range values cannot be inherently the same as claimed. Thus, for at least the foregoing

reasons, the assertion that the loading range values are inherently the same as claimed is inapplicable in the current application. Accordingly, the Office Action has failed to establish a *prima facie* case of obviousness for the claimed loading range values in view of Adams and Bowen.

As discussed above, Adams does not disclose “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1, nor are the target coating weight values of Adams inherently the same as the loading range values as claimed. In addition, because Bowen teaches away from such loading range values, the loading range values cannot be inherently the same as claimed. Bowen describes that “polymer tie layers can be as thin as about 0.15 mil.” Bowen, col. 6, ll. 54-55. That is, Bowen describes a thickness of the tie layer to be about 3 g/m². Therefore, Bowen does not teach or suggest “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1. Rather, because Bowen is directed towards a thickness less than a loading in the range of 7 to 20 g/m², Bowen teaches away from such loading range values. That is, Bowen discloses a tie layer thickness different than the claimed loading value of the application. Accordingly, Bowen does not teach or suggest “wherein the tie layer, or the one or more layers of the tie layer, has a loading in the range of 7 to 20 g/m²,” as recited in independent claim 1, nor is the tie layer thickness value of Bowen inherently the same as the loading range values as claimed.

In addition, Applicant submits that it would have not been obvious to combine the teachings of Adams and Bowen. Specifically, a person of ordinary skill would not reasonably expect the films of Bowen to work when replacing the sealant layers of Bowen with polymers mentioned in Adams because Bowen is directed at aggressive solvents which is something very different from food/juices of Adams. In one example, Bowen describes that “nylon acts as a good barrier for containing organic products such as solvents, e.g., amines, within the package.” *Id.*, col. 5, ll. 29-30. That is, Bowen describes that nylon is the amine solvent barrier rather than a polyolefin of the sealant layer. Therefore, a person of ordinary skill cannot conclude from Adams and Bowen that the sealant layer of Bowen is the layer responsible for the given properties sought in the different applications. Thus, it would not have been obvious to replace an olefin

copolymer of the sealant layer of Bowen with a cycloolefin copolymer of Adams because it is the combination of layers (e.g., including nylon of the flexible barrier) that contributes to the given barrier properties within the package of Bowen. Therefore, Applicant submits that it would have not been obvious to combine the teachings of Adams and Bowen.

Therefore, for at least these reasons, amended independent claim 1 is allowable over any combination of Adams and Bowen.

Accordingly, Applicant requests that the rejection of independent claim 1 under 35 U.S.C. § 103 be withdrawn.

Dependent Claims 2–12

Dependent claims 2–12 each depend from independent claim 1, and are therefore allowable for at least the same reasons that independent claim 1 is allowable.

Accordingly, Applicant requests that the rejection of dependent claims 2–12 under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is therefore respectfully requested.

The Commissioner is authorized to charge any fees or underpayments that may be due with this response, or credit any overpayments, to Deposit Account No. 08-2623.

If the Examiner believes a telephone conference would expedite prosecution of this Application, please call the undersigned at (303) 473-2700.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Christensen et al.

Application No.: 16/835,018

Filed: March 30, 2020

For: A METHOD FOR PROVIDING AN
EXTREME CHEMICAL RESISTANT
FILM, A FILM AND LAMINATE
OBTAINABLE THEREFROM

Customer No.: 26582

Confirmation No.: 7472

Examiner: Frances Tischler

Art Unit: 1765

**INFORMATION DISCLOSURE
STATEMENT**

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

Dear Commissioner:

Pursuant to the duty of disclosure set forth at 37 CFR §1.56 and the requirements for filing an Information Disclosure Statement set forth at 37 CFR §§1.97-1.98, enclosed is Form PTO/SB/08 (hereinafter “the Form”) with a list of all items being submitted for consideration by the Office. A legible copy of each item listed in the Form that is not a U.S. patent or a published U.S. patent application, and not identified as being cumulative, is enclosed.

The disclosure of the remaining documents identified on the Form is not to be construed as an admission that any of the documents, alone or in any combination, is considered to be material to patentability as defined in 37 CFR §1.56(b). Moreover, the disclosure of these documents is not to be construed as an admission that any of the documents are prior art as to the above-identified application.

Applicants believe that no fee is required for submission of this statement. However, if a fee is required, the Commissioner is authorized to deduct such a fee from the undersigned's Deposit Account No. 08-2623. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

/ Steven A. Avena /

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Holland & Hart LLP PO Box 11583 Salt Lake City, UT 84147			TISCHLER, FRANCES	
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			1765	
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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):

patentdocket@hollandhart.com

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.

Status of the Claims

Receipt is acknowledged of the Applicant's response filed on 5/10/21. Claims 1 and 4 - 7 have been amended. Claims 13 – 20 are withdrawn due to a restriction requirement. Claims 1 - 12 are now pending.

All outstanding objections and rejections, except for those maintained below, are withdrawn in light of applicant's amendments/remarks filed on 5/10/21.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

The following is a quotation of 35 U.S.C. 112(b):

(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

Claims 1 – 12 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor (or for applications subject to pre-AIA 35 U.S.C. 112, the applicant), regards as the invention.

Claim 1 has been amended from “coextruding a tie layer and a contact layer to provide a coextrusion layer”, wherein it is understood that both layers together are being

named “a coextruded layer”, to now reciting that the contact layer consists of a cycloolefin copolymer (COC) to provide a coextrusion layer”, which seems to indicate that only the COC layer is considered the coextrusion layer, although the claim nonetheless recites “coextruding a tie layer and a contact layer”. Claim 1 has also been amended to read to coat the coextrusion layer directly to the base layer. Therefore, it is unclear what is being claimed as directly coating the base layer, the COC contact layer only or the combination of the tie layer and COC contact layer. It is further confusing since Applicant’s Remarks of 5/10/21 seem to point to the contact layer being directly coated on the base layer, but the figures in the present specification points to the tie layer being coated directly on the base layer.

Claim Rejections - 35 USC § 102/103

Claims 1 - 12 are rejected under 35 U.S.C. 102(a)(1) as anticipated by or, in the alternative, under 35 U.S.C. 103 as obvious over ADAMS (US 2005/0037162).

The rejection is maintained as per reasons of record as stated in the previous office action of 2/9/21 and is incorporated herein:

ADAMS discloses (see entire document) a process of making a film that provides good oxygen barrier properties ([0004]) [as claimed], the process comprising:

providing a base layer, referred to as a functional barrier layer, comprising aluminum, polyamide or PET ([0019]) [also reading on the claimed resistant to water or oxygen, since they are the same layer as recited in the present invention, see for ex. [0033] of the instant Published Application] or additional base layers such as paperboard substrate and additional layers with or without fillers;

coextruding layers onto the base layer to coat said base layer ([0028], [0044], [0045], figures), wherein the coextruded layers comprise one or more tie layers and contact layers selected from ethylene acrylic acid (EAA) and cycloolefin copolymer (COC), respectively ([0023], [0024], [0030], table in [0034]), claims 7, 10, 14) [as claimed].

ADAMS is silent regarding the loading and melting point of the layers. However, since ADAMS discloses the claimed process of making the film and the claimed layers

comprising COC and EAA, their loading and melting point values are inherently the same as claimed. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir.1990). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established." See MPEP 2112.01. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). Alternatively, for the loading value, one of ordinary skill in the art would know to vary the process parameters such as the temperature in the extruder, the degree of dryness of the polymers upon extrusion, the thickness of the film, etc., wherein ADAMS discloses target coating weights for the various layers ([0037]) and discloses that constant loading levels are achieved even if one would add fillers to a layer ([0043]), all of which may affect the loading, to achieve ADAMS' stated objective of making a film comprising a base layer and coextruded tie and contact layers that provides for good packaging with good oxygen barrier and is effective in minimizing scalping ([0004]), and have thus arrived at the claimed loading.

ADAMS discloses few contact layers to choose from comprising linear polyolefins or cyclic olefin copolymer ([0023]) and few tie layers to choose from comprising ethylene acrylic acid, polyolefins and vinyl acetate ([0024], claim 10). If the genus is small, if one can at once envisage each member of the group, then it is anticipated. *In re Petering* 301 F.2d 676, 681 (CCPA 1962). Alternately, it would be obvious to one skilled in the art to choose from ADAMS' small list of tie polymers and contact polymers the combination that produces ADAMS' stated objective of making a film comprising a base layer, and tie and contact layers that provides for good packaging with good oxygen barrier and is effective in minimizing scalping ([0004]), and have thus arrived at the claimed combination of COC of claim 1 and the acrylic acids of claims 10-12.

Regarding the amendment that the contact layer consists of COC, ADAMS discloses that the contact layer may or may not have a filler (abstract); discloses one or more olefin contact layers [i.e., COC layers] overlaying the functional barrier layer, wherein at least one of which incorporates fillers ([0011]); and further discloses that economic and converting configuration considerations dictate whether one, some or all layers between the functional barrier and food product have filler added ([0025]) [wherein the COC layers not having fillers read on the claimed layers consisting of COC]. Alternatively and in addition, it would have been obvious to one of ordinary skill in

the art to have used COC layers without fillers since ADAMS discloses to choose to either use or not use filler and that the choice of using fillers or not using fillers depends on economic and converting configuration considerations.

Claim Rejections - 35 USC § 103

Claims 1 - 12 are rejected under 35 U.S.C. 103 as being unpatentable over BOWEN et al (US 6,120,860) in view of ADAMS (US 2005/0037162).

The rejection is maintained as per reasons of record as stated in the previous office action of 2/9/21 and is incorporated herein:

ADAMS' disclosure is discussed above and is incorporated herein by reference.

BOWEN discloses (see entire document) a process of making a package comprising multilayer film, the process comprising providing a base layer and coextruding a tie layer and a sealant layer to coat the base layer (abstract). The film structure has superior properties for holding aggressive organics, wherein the film comprises high barrier materials (2:48-3:7).

The laminate comprises a first and second layer which can have additional layers (3:40-44).

The adhesive or tie layer can consist of a plurality of layers and is chosen from polyethylene and preferably ethylene acrylic acid (EAA) (3:52-4:10, 4:51-63) [as claimed].

The high barrier material is aluminum or nylon (4:10-16) [thus reading on the claimed water or oxygen resistant, noting that they are the same materials used in the present invention], and further discloses that the high barrier prevents water or moisture to contact the product in the package (5:15-32) [meeting the claimed water resistant layer].

The layers are coextruded and adhered to the core layer (4:49-51) [as claimed].

BOWEN discloses that the sealant or contact layer is selected from polyolefin polymers, polyolefin copolymers or EVA (4:32-42), failing to teach that the olefin copolymer is explicitly a cycloolefin copolymers. However, it would have been obvious to one of ordinary skill in the art to have replaced BOWEN's olefin copolymer with ADAMS' cycloolefin copolymer with the motivation that ADAMS discloses that linear polyolefins and cyclic olefin copolymers are interchangeably used as contact layers ([0023]) in the same field of endeavor disclosed by both references of making a package comprising a multilayered film having a base layer of aluminum or nylon/polyamide, and coextruded a coating film comprising an EAA tie layer and an olefin contact layer onto said base layer.

BOWEN in view of ADAMS is silent regarding the loading and melting point of the layers. However, since the references disclose the claimed process of making the film and the claimed layers comprising COC and EAA, their loading and melting point values are inherently the same as claimed. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir.1990). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established." See MPEP 2112.01. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). Alternatively, for the loading value, one of ordinary skill in the art would know to vary the process parameters such as the temperature in the extruder, the degree of dryness of the polymers upon extrusion, the thickness of the film, etc., wherein BOWEN discloses that the layers can be oriented or not (5:55-59), can be laminated, extruded, coextruded, blown extruded extrusion coated, etc., can be made by different apparatuses (6:27-40), and the layers can vary in thickness from 2.0 to 20 mils (6:40-62), all of which may affect the loading, and wherein ADAMS discloses target coating weights for the various layers ([0037]) and discloses that the desired loading levels are achieved even if one would add fillers to a layer ([0043]), to achieve BOWEN's stated objective of making a film comprising a base layer, and tie and contact layers that provides for high barrier packaging, and have thus arrived at the claimed loading.

Double Patenting

Claims 1 – 12 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 - 20 of copending Application No. 16/425,067 (reference application).

The rejection is maintained as per reasons of record as stated in the previous office action of 2/9/21 and is incorporated herein:

Although the claims at issue are not identical, they are not patentably distinct from each other because both sets of claims recite the same invention with obvious variants in the language. For instance, the present claims recite that the loading of the contact layer is 4 – 20 g/m² and that of the tie layer is 7 – 20 g/m² while in '067 the loading is claimed as an equation between the loading of the contact layer and the tie layer.

This is a provisional nonstatutory double patenting rejection because the patentably indistinct claims have not in fact been patented.

Claims 1 – 12 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 - 36 of copending

Application No. 16/780,999 (reference application).

The rejection is maintained as per reasons of record as stated in the previous office action of 2/9/21 and is incorporated herein:

Although the claims at issue are not identical, they are not patentably distinct from each other because '999 recites a relative energy difference value for the contact layer while the present claims are more broadly silent regarding this value, thus fully encompassing '999.

This is a provisional nonstatutory double patenting rejection because the patentably indistinct claims have not in fact been patented.

Response to Arguments

Applicant's arguments filed 5/10/21 have been fully considered but they are not persuasive.

Applicant submits that Terminal Disclaimers for 15/780,999 and 16/425,067 have been submitted.

In response, please note that the Office has not received the TDs. The rejection therefore stands until such time as the TDs are filed with the Office.

Applicant submits that ADAMS does not teach coextruding a tie layer and contact layer consisting of COC to provide a coextrusion layer; that the laminate in Fig 2 of ADAMS comprises a tie layer 13 with or without filler which is applied adjacent to barrier layer 12 and an interior layer or food contact layer containing filler which is applied over the tie layer; that a contact layer containing filler is not the same of the claimed contact layer consisting a COC.

Applicant's argument has been considered but is not persuasive:

ADAMS discloses that the contact layer may or may not have filler. See abstract: "...the innermost food contact layer which may or may not contain filler." ADAMS' COC contact layer not having filler reads on the claimed contact layer consisting of COC.

Applicant submits that ADAMS does not disclose the claimed coating the coextrusion layer directly to the base layer; that ADAMS applies the tie layer and other layers by either coextrusion or by standard lamination of extrusion lamination processes; that the laminate structure of fig. 2 of ADAMS comprises a tie layer 13 with or without filler that is applied adjacent to the barrier layer 12 and an interior layer or food contact layer containing a filler is applied onto the tie layer; that such is not the same as the claimed coating the coextrusion layer directly to the base layer; that is, that ADAMS describes a method for applying the tie layer to the base layer and applying the contact layer to the tie layer, but not the claimed contact layer consisting of a COC to provide a coextrusion layer and coating the coextrusion layer directly to the base layer.

Applicant's argument has been considered but is not persuasive:

Applicant's Remarks are confusing. Based on the amendments to claim 1 and the Remarks, it is unclear what is being claimed. Specifically, claim 1 has been amended from "coextruding a tie layer and a contact layer to provide a coextrusion layer", wherein it is understood that both layers together are being named "a coextruded layer", to now reciting that the contact layer consists of a COC to provide a coextrusion layer", which seems to indicate that only the COC layer is considered the

coextrusion layer, although the claim nonetheless recites that “coextruding a tie layer and a contact layer”. Claim 1 has also been amended to read to coat the coextrusion layer directly to the base layer. Therefore it is unclear what is being claimed as directly coating the base layer, the COC contact layer only or the combination of the tie layer and COC contact layer.

Based on Applicant’s remarks, it seems that Applicant means to claim that it is the COC contact layer that is coated directly onto the base layer since Applicant believes that ADAMS discloses that the tie layer 13 is extruded directly onto the base layer, not the COC contact layer, based on ADAMS’ fig 2.

If that is the case, please note that in the figures 1 and 2 of the present application, the tie layer 3 is extruded directly onto the base layer 2 while the COC contact layer is extruded onto the tie layer, similarly to fig 2 of ADAMS.

If Applicant means to claim that it is only the COC contact layer that is in direct contact with the base layer, it is asked that Applicant shows where this is found in the present specification, so as to avoid a rejection based on new matter.

Be it as it may:

ADAMS discloses that various scenarios are possible. For instance:

Fig 3 shows that the polyolefin (i.e., COC) contact layer 21 does not have a filler; again reading on the claimed contact layer consisting of COC.

In figure 3, the additional layer 20 is also considered the base layer, noting that the present claims do not specify what constitutes a base layer, and the COC contact layer is extruded directly onto said base layer, thus reading on the claimed coextrusion layer being coated directly onto the base layer. This applies if Applicant means to claim

that it is only the COC that is directly coated onto the base layer, not the tie layer with the COC contact layer.

ADAMS also provides various other examples of layer positioning in the table by paragraph [0034].

Regarding coextrusion, ADAMS discloses that the layers are coextruded ([0045]); that the tie layer and other layers are coextruded ([0028]); and that layers are extrusion coated ([0038]. ADAMS, therefore, teaches coextrusion of any of the layers and coextrusion of a combination of any of the layers.

Applicant submits that BOWEN does not overcome the deficiencies of ADAMS.

Applicant's argument is not convincing.

The rejection is over BOWEN in view of ADAMS, not ADAMS in view of BOWEN. ADAMS is discussed above and reads on the claims. BOWEN fails to teach COC specifically, which is overcome by ADAMS.

Applicant submits that BOWEN discloses a tie layer between the flexible barrier and the sealant; that sealant/tie/nylon/tie/sealant can be formed as coextrusion which is then adhered to the second layer element; that the coextrusion does not include a COC, much less coating the coextrusion layer directly to the base layer, as per claim 1.

Applicant's argument has been considered but is not persuasive:

BOWEN's process comprises providing a base layer and coextruding a tie layer and a sealant layer to coat the base layer (abstract). The layers are coextruded and adhered to the core layer (4:49-51). BOWEN discloses polyolefins but not explicitly

cycloolefins (COC). However, it would have been obvious to one of ordinary skill in the art to have replaced BOWEN's olefin copolymer with ADAMS' cycloolefin copolymer with the motivation that ADAMS discloses that linear polyolefins and cyclic olefin copolymers are interchangeably used as contact layers ([0023]) in the same field of endeavor disclosed by both references of making a package comprising a multilayered film having a base layer of aluminum or nylon/polyamide, and coextruded a coating film comprising an EAA tie layer and an olefin contact layer onto said base layer.

Applicant submits that the Office did not provide explicit analysis as to why, inherently, the melting point of the tie layer differs from the melting point of the COC by 30°C or less in ADAMS and in BOWEN.

Applicant's argument is not convincing.

As explained in the previous Office action of 2/9/21, pages 4 and 6-7:

Both ADAMS and ADAMS in view of BOWEN disclose the claimed process of making the film and the claimed layers comprising COC contact layer and EAA tie layer.

Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir.1990). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established." See MPEP 2112.01.

In other words, since ADAMS and ADAMS in view of BOWEN disclose the same COC and EAA as in the present claims, it is expected that their melting points are the

same as in the present invention and that therefore the difference in the melting points of COC and EAA of the references are also the same as claimed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). 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 date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **FRANCES TISCHLER** whose telephone number is (571)270-5458. The examiner can normally be reached on Monday-Friday, 8:00 AM - 8:00 PM EST, midday flex.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an