AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Northern District of Ohio, Western Division on the following

☐ Trademarks or ◉ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
3:14-cv-00803-DAK	4/14/2014	for the Northern District of Ohio, Western Division

PLAINTIFF	DEFENDANT
Fast Felt Corporation	Owens Corning Roofing and Asphalt, LLC Owens Corning

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	8,137,757	3/20/2012	Fast Felt Corporation
2			
3			
4			
5			

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT		
CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director **Copy 3—Upon termination of action, mail this copy to Director**
Copy 2—Upon filing document adding patent(s), mail this copy to Director **Copy 4—Case file copy**

Print Save As... Reset

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.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/704,981	03/20/2012	8137757	FFC-500-003	7359

29281 7590 02/29/2012

JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056

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.

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

David Allan Collins, Houston, TX;
George William Jackson, Houston, TX;
Miguel E. Madero O'Brien, Mexico City, MEXICO;

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

Bib Data Sheet

CONFIRMATION NO. 7359

SERIAL NUMBER	FILING OR 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/704,981	02/12/2010 RULE	427	1717	FFC-500-003

APPLICANTS

David Allan Collins, Houston, TX;
George William Jackson, Houston, TX;
Miguel E. Madero O'Brien, Mexico City, MEXICO;

** CONTINUING DATA **********

This application is a CON of 11/475,455 06/27/2006 PAT 7666498

** FOREIGN APPLICATIONS **********

IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** SMALL ENTITY **
** 02/25/2010

		STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
Foreign Priority claimed	☐ yes ☐ no	TX	10	16	4
35 USC 119 (a-d) conditions met	☐ yes ☐ no ☐ Met after Allowance				
Verified and Acknowledged	Examiner's Signature Initials				

ADDRESS
29281

TITLE
PRINT METHODOLOGY FOR APPLYING POLYMER MATERIALS TO ROOFING MATERIALS TO FORM NAIL TABS OR REINFORCING STRIPS

FILING FEE RECEIVED		
572	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (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)

29281 7590 11/10/2011
JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056

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

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

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/704,981	02/12/2010	David Allan Collins	FFC-500-003	7359

TITLE OF INVENTION: PRINT METHODOLOGY FOR APPLYING POLYMER MATERIALS TO ROOFING MATERIALS TO FORM NAIL TABS OR REINFORCING STRIPS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$870	$300	$0	$1170	02/10/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
FLETCHER III, WILLIAM P	1717	427-428180

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/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form 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 has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Fast Felt Corporation

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Houston, Texas

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

4a. The following fee(s) are submitted:
☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies ____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
☒ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number ____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
☒ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /James D. Petruzzi 35,644/ Date February 10, 2012

Typed or printed name James D. Petruzzi Registration No. 35,644

This collection of information 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 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, 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.

Electronic Patent Application Fee Transmittal

Application Number:	12704981
Filing Date:	12-Feb-2010
Title of Invention:	PRINT METHODOLOGY FOR APPLYING POLYMER MATERIALS TO ROOFING MATERIALS TO FORM NAIL TABS OR REINFORCING STRIPS
First Named Inventor/Applicant Name:	David Allan Collins
Filer:	James Daniel Petruzzi
Attorney Docket Number:	FFC-500-003

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

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	2501	1	870	870
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1170**

Electronic Acknowledgement Receipt

EFS ID:	12046588
Application Number:	12704981
International Application Number:	
Confirmation Number:	7359
Title of Invention:	PRINT METHODOLOGY FOR APPLYING POLYMER MATERIALS TO ROOFING MATERIALS TO FORM NAIL TABS OR REINFORCING STRIPS
First Named Inventor/Applicant Name:	David Allan Collins
Customer Number:	29281
Filer:	James Daniel Petruzzi
Filer Authorized By:	
Attorney Docket Number:	FFC-500-003
Receipt Date:	10-FEB-2012
Filing Date:	12-FEB-2010
Time Stamp:	11:02:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$1170
RAM confirmation Number	8626
Deposit Account	
Authorized User	

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)	IssueFeeStatement12704981img.pdf	581636 c92497555979ceaf35480ba5b83fe7a5c375aa2e	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	31742 4b680e0c10496be1507ce70b652fb159468d91f3	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	613378	

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

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United States Patent and Trademark Office
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www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

29281 7590 11/10/2011

JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056

EXAMINER
FLETCHER III, WILLIAM P

ART UNIT	PAPER NUMBER
1717	

DATE MAILED: 11/10/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/704,981	02/12/2010	David Allan Collins	FFC-500-003	7359

TITLE OF INVENTION: PRINT METHODOLOGY FOR APPLYING POLYMER MATERIALS TO ROOFING MATERIALS TO FORM NAIL TABS OR REINFORCING STRIPS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$870	$300	$0	$1170	02/10/2012

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 SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

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 and an extra copy of the form should be submitted. 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: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (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)

29281 7590 11/10/2011

JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056

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

Certificate of Mailing or Transmission

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

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/704,981	02/12/2010	David Allan Collins	FFC-500-003	7359

TITLE OF INVENTION: PRINT METHODOLOGY FOR APPLYING POLYMER MATERIALS TO ROOFING MATERIALS TO FORM NAIL TABS OR REINFORCING STRIPS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$870	$300	$0	$1170	02/10/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
FLETCHER III, WILLIAM P	1717	427-428180

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/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form 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 has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(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. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

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

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

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

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information 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 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, 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.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/704,981	02/12/2010	David Allan Collins	FFC-500-003	7359

29281 7590 11/10/2011

JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056

EXAMINER	
FLETCHER III, WILLIAM P	

ART UNIT	PAPER NUMBER
1717	

DATE MAILED: 11/10/2011

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

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

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 Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

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.	Applicant(s)	
	12/704,981	COLLINS ET AL.	
	Examiner	Art Unit	
	William Phillip Fletcher III	1717	

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

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

1. ☒ This communication is responsive to *the amdt. filed after final 10/28/2011; entered*.

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 *1-9*.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of 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. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ 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).

7. ☐ 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. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/William Phillip Fletcher III/
Primary Examiner, Art Unit 1717

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed on 10/28/2011 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 7,201,946, has been reviewed and is accepted. The terminal disclaimer has been recorded.

Response to Arguments

2. Upon further consideration, the claimed subject matter is fully supported as noted by Applicant in the remarks filed 10/28/2011.

EXAMINER'S AMENDMENT

3. 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.

The application has been amended as follows:

1. (currently amended) A method of making a roofing or building cover material, which comprises treating an extended length of substrate, comprising the steps of:

[[D]]depositing tab material onto the surface of said roofing or building cover material at a plurality of nail tabs from a lamination roll, said tab material bonding to the surface

of said roofing or building cover material by pressure between said roll and said surface.

2. (original) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is substantially a polymer material.

3. (original) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is hardened or cured by ultra-violet or visible light.

4. (previously presented) A method of making a roofing or building cover material in accordance with claim 1, wherein said nail tabs are formed in a continuous strip.

5. (previously presented) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is deposited on said lamination roll from an engraved print roll positioned in contact with said lamination roll.

6. (previously presented) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is pre-formed before contact with said lamination roll.

7. (previously presented) A method of making a roofing or building cover material comprising the steps of first depositing nail tab material at a plurality of locations on said roofing or building cover material, said nail tab material is substantially made of a polymeric material, and subsequently pressure adhering said nail tab material into nail tabs on said roofing or building cover material with a pressure roll.

8. (original) A method of making a roofing or building cover material in accordance with claim 7, wherein said pressure roll has an engraved pattern that presses said tab material in a pre-determined shape.

9. (original) A method of making a roofing or building cover material in accordance with claim 7, wherein said tab material, while existing in a liquid or viscous state, is hardened or cured by means of ultra-violet or visible light.

10-16. (cancelled)

4. Claims 1-9 are allowed.

5. The following is an examiner's statement of reasons for allowance: The closest prior art has been made of record at ¶¶ 7(C) and 12 of the Office action mailed 08/09/2011.

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 William Phillip Fletcher III whose telephone number is (571)272-1419. The examiner can normally be reached on Monday through Friday, 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571) 272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Phillip Fletcher III/
Primary Examiner, Art Unit 1717

11/07/2011

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12704981	COLLINS ET AL.
	Examiner	**Art Unit**
	WILLIAM P FLETCHER III	1717

ORIGINAL		INTERNATIONAL CLASSIFICATION									
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED				
427	428.18	B	0	5	D	1 / 28 (2006.01.01)	B	3	2	B	7 / 12 (2006.01.01)
CROSS REFERENCE(S)		B	0	5	D	3 / 06 (2006.01.01)					

CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
427	508	428.06			

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1														
2	2														
3	3														
4	4														
5	5														
6	6														
7	7														
8	8														
9	9														

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	9	
/William Phillip Fletcher III/ Primary Examiner, Art Unit 1717	11/7/2011	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	NONE

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12704981	COLLINS ET AL.
	Examiner	Art Unit
	William P Fletcher III	1715

SEARCHED

Class	Subclass	Date	Examiner
427	508, 186, 188, 256, 428.06, 428.18, 428.2	12/26/2010	/WPF/
52	746.11	12/26/2010	/WPF/
Above	to date.	11/7/2011	/WPF/

SEARCH NOTES

Search Notes	Date	Examiner
Inventor name search: dbl pat rej of record. EAST.	12/16/2010	/WPF/
EAST	8/11/2011	/WPF/
EAST	11/7/2011	/WPF/

INTERFERENCE SEARCH

Class	Subclass	Date	Examiner
427	508, 428.06, 428.18	11/7/2011	/WPF/

	/William Phillip Fletcher III/ Primary Examiner, Art Unit 1717

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5477	((427/508) or (427/186) or (427/188) or (427/256) or (427/428.06) or (427/428.18) or (427/428.2) or (52/746.11)).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/07 13:25
L3	9212	roof$3 and ((nail$1tab) (roof$3 adj tab) (secur$4 near3 (element tab)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/07 13:26
L4	150	L3 and (((transfer$4 laminat$4) near3 (roll substrate)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/07 13:26
L5	5	L1 and L4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/07 13:26
L6	131	roof$3 and ((nail$1tab) (roof$3 adj tab))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/07 13:27
L7	3	L6 and (((transfer$4 laminat$4) near3 (roll substrate)) (liquid near3 polymer$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/07 13:27
L8	36	roof$3 and nail adj tab	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/07 13:27

L9	6	L8 and (((transfer$4 laminat$4) near3 (roll substrate)) (liquid near3 polymer$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/07 13:27
L10	557	(pattern$3 engrav$3 gravure (reverse adj gravure)) near3 (pressure adj roll$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/07 13:28
L11	9	L10 same ((liquid molten) with polymer$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/07 13:28
L21	2	(("7666498") or ("7201946")).PN.	USPAT	OR	OFF	2011/11/07 14:04
S1	2	(("7666498") or ("7201946")).PN.	USPAT	OR	OFF	2010/12/21 13:32
S2	4	nail$1tab	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/23 15:58
S3	12	(("4554196") or ("5365709") or ("6451409") or ("6033723") or ("6531027") or ("6210757") or ("3003906") or ("4618528") or ("4624721") or ("5599586") or ("20030215594") or ("20030203145")).PN.	US-PGPUB; USPAT	OR	OFF	2010/12/23 16:04
S4	15	("3779373" | "3841474" | "3904032" | "4033499" | "4554196" | "4624721" | "4627207" | "4641472" | "4788807" | "5130178" | "5309685" | "5365709" | "5407313" | "5415511" | "5469671").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2010/12/26 14:47

S5	8	(("4885887") or ("4932171") or ("3900102")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/12/26 14:52
S6	2	("4649686").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/12/26 14:55
S7	5090	((427/508) or (427/186) or (427/188) or (427/256) or (427/428.06) or (427/428.18) or (427/428.2) or (52/746.11)).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/12/26 15:02
S8	8748	roof$3 and ((nail$1tab) (roof$3 adj tab) (secur$4 near3 (element tab)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:04
S9	337	S8 and (((transfer$4 laminat$4) near3 (roll substrate)) (liquid near3 polymer$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:05
S10	145	S8 and (((transfer$4 laminat$4) near3 (roll substrate)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:06
S11	5	S7 and S10	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:06
S12	127	roof$3 and ((nail$1tab) (roof$3 adj tab))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:06

S13	3	S12 and (((transfer$4 laminat$4) near3 (roll substrate)) (liquid near3 polymer$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:06
S14	3	roof$3 and nail$1tab	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:14
S15	35	roof$3 and nail adj tab	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:15
S16	6	S15 and (((transfer$4 laminat$4) near3 (roll substrate)) (liquid near3 polymer$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:16
S17	29	S15 not S16	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:17
S18	1	("6531027").PN.	US-PGPUB; USPAT	OR	OFF	2010/12/26 15:31
S19	1	("6451409").PN.	US-PGPUB; USPAT	OR	OFF	2010/12/26 15:48
S20	1	("20030215594").PN.	US-PGPUB; USPAT	OR	OFF	2010/12/26 15:58
S21	23	((engraved gravure) near3 roller) same ((liquid molten) with polymer$3) same pressure	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 16:16
S22	20	((pattern$3 (reverse adj gravure)) near3 roller) same ((liquid molten) with polymer$3) same pressure	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 16:23

S23	514	(pattern$3 engrav$3 gravure (reverse adj gravure)) near3 (pressure adj roll$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 16:26
S24	8	S23 same ((liquid molten) with polymer$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 16:26
S25	1	("6451409").PN.	US-PGPUB; USPAT	OR	OFF	2011/06/01 12:12
S26	5363	((427/508) or (427/186) or (427/188) or (427/256) or (427/428.06) or (427/428.18) or (427/428.2) or (52/746.11)).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/08/07 16:52
S27	9086	roof$3 and ((nail$1tab) (roof$3 adj tab) (secur$4 near3 (element tab)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:52
S28	149	S27 and (((transfer$4 laminat$4) near3 (roll substrate)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:52
S29	5	S26 and S28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:52
S30	35	roof$3 and nail adj tab	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:52
S31	6	S30 and (((transfer$4 laminat$4) near3 (roll substrate)) (liquid near3 polymer$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:53

S32	1064	S27 and (apply applied application applying deposit deposition depositing deposited coat $3) with pressure	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:54
S33	11	S30 and ((apply applied application applying deposit deposition depositing deposited coat $3) with pressure)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:54
S34	2	("7201946").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 12:48

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	12	((427/508) or (427/186) or (427/188) or (427/256) or (427/428.06) or (427/428.18) or (427/428.2) or (52/746.11)).CCLS.	UPAD	OR	OFF	2011/11/07 13:25
L12	4096	roof$3 and ((nail$1tab) (roof$3 adj tab) (secur $4 near3 (element tab)))	USPAT; UPAD	OR	ON	2011/11/07 14:01
L13	69	L12 and (((transfer$4 laminat$4) near3 (roll substrate)))	USPAT; UPAD	OR	ON	2011/11/07 14:02
L14	0	L2 and L13	USPAT; UPAD	OR	ON	2011/11/07 14:02
L15	57	roof$3 and ((nail$1tab) (roof$3 adj tab))	USPAT; UPAD	OR	ON	2011/11/07 14:02
L16	1	L15 and (((transfer$4 laminat$4) near3 (roll substrate)) (liquid near3 polymer$3))	USPAT; UPAD	OR	ON	2011/11/07 14:02
L17	14	roof$3 and nail adj tab	USPAT; UPAD	OR	ON	2011/11/07 14:03

L18	2	L17 and (((transfer$4 laminat$4) near3 (roll substrate)) (liquid near3 polymer$3))	USPAT; UPAD	OR	ON	2011/11/07 14:03
L19	203	(pattern$3 engrav$3 gravure (reverse adj gravure)) near3 (pressure adj roll$3)	USPAT; UPAD	OR	ON	2011/11/07 14:03
L20	2	L19 same ((liquid molten) with polymer $3)	USPAT; UPAD	OR	ON	2011/11/07 14:03

11/7/11 2:43:44 PM
C:\Documents and Settings\WFletcher\My Documents\EAST\Workspaces\12704981.wsp

OK TO ENTER: /WPF/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Collins et al.	)	Group Art Unit: 1783
	)	
Appln. Serial No.: 12/704,981	)	Examiner: Fletcher, William P, III
	)	
Filed: 02/12/2010	)	
	)	
For: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips	)	

Response to Final Action

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. § 1.8(a)(1)(i)(C)
Date of Transmission: 28 October 2011
I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office (USPTO) via the USPTO electronic filing system (EFS-Web) on the date shown above.
By: _____ James Petruzzi

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

Sir:

Please enter the following amendment in response to the Final Office Action mailed August 9, 2011.

A shortened statutory period of three months is set to expire November 9, 2011. A reply is being filed within three months of the mailing date of the action.

An advisory action was mailed in response to a previous amendment indicating that all claims would be allowable in light of arguments made in that amendment, but

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12704981	COLLINS ET AL.
	Examiner	**Art Unit**
	PRASHANT J KHATRI	1783

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

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/28/2010	12/26/2010	08/08/2011	11/07/2011					
	1	÷	=	=	=					
	2	÷	✓	✓	=					
	3	÷	✓	✓	=					
	4	÷	=	=	=					
	5	÷	=	=	=					
	6	÷	=	=	=					
	7	÷	✓	✓	=					
	8	÷	✓	✓	=					
	9	÷	✓	✓	=					
	10	÷	N	N	-					
	11	÷	N	N	-					
	12	÷	N	N	-					
	13	÷	N	N	-					
	14	÷	N	N	-					
	15	÷	N	N	-					
	16	÷	N	N	-					

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	12/704,981	COLLINS ET AL.	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 10/28/11	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:

jean proctor

U.S. Patent and Trademark Office

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Collins et al.	)	Group Art Unit: 1783
	)	
Appln. Serial No.: 12/704,981	)	Examiner: Fletcher, William P, III
	)	
Filed: 02/12/2010	)	
	)	
For: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips	)	

Response to Final Action

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. § 1.8(a)(1)(i)(C)
Date of Transmission: 28 October 2011
I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office (USPTO) via the USPTO electronic filing system (EFS-Web) on the date shown above.
By: _____ James Petruzzi

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

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Please enter the following amendment in response to the Final Office Action mailed August 9, 2011.

A shortened statutory period of three months is set to expire November 9, 2011. A reply is being filed within three months of the mailing date of the action.

An advisory action was mailed in response to a previous amendment indicating that all claims would be allowable in light of arguments made in that amendment, but

the amendment was not entered due to a technical deficiency pertaining to claim formatting and removing text after the word "cancelled."

Claims 1-16 are currently pending in this application. Claims 10 through 16 are cancelled as they pertain to nonelected claims. Claims 1 and 4-6 have been allowed. Claims 2 and 3 were subject to a terminal disclaimer to overcome a non-statutory non-obviousness-type double patenting rejection. A Statement under 37 CFR 3.73(b) had been submitted by the current owner of the application and a terminal disclaimer had been filed and appropriate fee paid. In view of the rejection of that terminal disclaimer as being signed by an attorney of record but not having previously filed a power of attorney, applicants submitted a new terminal disclaimer signed by the President of Fast Felt Corporation, owner of the application, who is empowered to act on behalf of the corporation. A corrected Statement under 37 CFR 3.73(b) is herewith submitted to indicate the assignee's name in place of the word "assignee" which was a typographical error in the previously filed 37 CFR 3.73(b) Statement. A new terminal disclaimer is also submitted as requested.

Amendments to the Specification begin on page 3 of this paper.

Amendments to the Claims begin on page 4 of this paper.

REMARKS

The specification has been amended to reflect that 11/475,455 has issued as U.S. Patent No. 7,666,498 and the addition has been underlined to denote amended material.

Claims 1, 4-6 have been previously allowed. Claims 10 through 16 have been cancelled and all text pertaining thereto has been removed with only the word "cancelled" following each number of the claim.

Claims 2 and 3 were rejected on the ground of nonstatutory obviousness-type double patenting over U.S. Patent No. 7,201,946. A corrected statement under 37 CFR 3.73(b) has been filed by the current owner of the instant application and earlier patent and a terminal disclaimer has been submitted signed by the president of the current owner of the patent application who is empowered to act on behalf of the owner. The appropriate fee was previously paid to overcome this rejection.

Claims 7-9 were rejected under 35 U.S.C. 112 as not being described in the specification sufficiently to convey the inventors were in possession of the claimed invention. Applicants respectfully disagree.

Figure 2 and accompany text at paragraph [000172] on page 16, lines 9-16, desribe and show the deposition of tab material on roofing material 200 and a subsequent pressure step through "press rolls module 204" which applies pressure to the roll after deposition of tab material. Applicant believes that this disclosure and the accompanying figure overcome the 35 U.S.C. 112 objection and demonstrate that the claimed subject matter was disclosed in the specification.

Claims 2, 3, and 7-9 as amended are in condition for allowance with claims 1, and 4-6 having been previously allowed.

The forgoing documents are being filed via the U.S. Patent and Trademark Office's EFS-Web electronic filing system.

Please link this application to Customer No. 29281 so that its status may be checked via the PAIR System.

Dated: October 28, 2011

Respectfully submitted,

/James D Petruzzi 35,644/
James D. Petruzzi, Reg. No. 35,644
Mason & Petruzzi
4900 Woodway
Suite 745
Houston, TX 77056
Customer Number 29281

PTO/SB/96 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Fast Felt Corporation

Application No./Patent No.: 12/704,981 Filed/Issue Date: 02/12/2010

Titled: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips

Fast Felt Corporation , a corporation

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

states that it is:

1. [X] the assignee of the entire right, title, and interest in;

2. [ ] an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or

3. [ ] the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

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

OR

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

1. From: D. Collins, G. Jackson, M. Madero-O'brien To: LFF Systems, Inc.

The document was recorded in the United States Patent and Trademark Office at
Reel 026376, Frame 0519, or for which a copy thereof is attached.

2. From: LFF Systems, Inc. To: Fast Felt Corporation

The document was recorded in the United States Patent and Trademark Office at
Reel 026381, Frame 0220, or for which a copy thereof is attached.

3. From: _____ To: _____

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

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

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

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

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

/David A. Collins/ 10/25/2011

Signature Date

David A. Collins President

Printed or Typed Name Title

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.

PTO/SB/26 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	Docket Number (Optional)

In re Application of: Collins, David A. et al.

Application No.: 12/704,981

Filed: 02/12/2010

For: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips

The owner*, East Felt Corporation, of 100 percent interest 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 **prior patent** No. 7,201,946 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. 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 the **prior patent** 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 the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

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 presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☑ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

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.

2. ☐ The undersigned is an attorney or agent of record. Reg. No. _____

/David A. Collins/ — Signature
10/25/2011 — Date

David A. Collins, President of Fast Felt Corporation — Typed or printed name

713 784-5513 — Telephone Number

☑ Terminal disclaimer fee under 37 CFR 1.20(d) included.

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

*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.

Privacy Act Statement

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

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

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

Electronic Acknowledgement Receipt

EFS ID:	11288895
Application Number:	12704981
International Application Number:	
Confirmation Number:	7359
Title of Invention:	Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips
First Named Inventor/Applicant Name:	David Allan Collins
Customer Number:	29281
Filer:	James Daniel Petruzzi
Filer Authorized By:	
Attorney Docket Number:	FFC-500-003
Receipt Date:	28-OCT-2011
Filing Date:	12-FEB-2010
Time Stamp:	13:16:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment After Final	RespFOAimg.pdf	1306958 5638c5223756d32f414b15f74a894da949932a58	no	6

Warnings:	
Information:	

2	Assignee showing of ownership per 37 CFR 3.73(b).	37CFR373bimg.pdf	833832 732b9cf0b88559dcb9fab67b5bf52b8d04b45a98	no	2
Warnings:					
Information:					
3	Terminal Disclaimer Filed	sb0026img.pdf	830582 6df13a455eec5912c79a64b2f413eb4f10f24799	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	2971372		

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.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
12/704,981	02/12/2010	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 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			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	10/28/2011	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 9	Minus	** 20	= 0	X $30 =	0	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 2	Minus	***4	= 0	X $125 =	0	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/NICOLE LAWRENCE/

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

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

IN THE SPECIFICATION

Please amend the specification in paragraph 14, line 2 and add the phrase "now issued as U.S. Patent No. 7,666,498" after "2006." Paragraph 14 now reads:

This application is a continuation of divisional application No. 11/475,455 filed June 27, 2006 now issued as U.S. Patent No. 7,666,498 from co-pending application No. 10/855,264 filed May 27, 2004, now issued as U.S. Patent No. 7,201,946 and is related to the following U.S. patent applications: provisional patent application number 60/474,194 titled Machine and Method for Applying Thermoplastics and Adhesives To Roofing Materials with Nail Tabs filed May 29, 2003 and provisional patent application number 60/485,774 titled Machine and Method for Applying Thermoplastics and Adhesives To Roofing Materials with Nail Tabs filed July 9, 2003, which are hereby incorporated by reference as if fully set forth herein.

IN THE CLAIMS

1. (Allowed) A method of making a roofing or building cover material, which comprises treating an extended length of substrate comprising the steps of:

Depositing tab material onto the surface of said roofing or building cover material at a plurality of nail tabs from a lamination roll, said tab material bonding to the surface of said roofing or building cover material by pressure between said roll and said surface.

2. (original) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is substantially a polymer material.

3. (original) A method of making a roofing or building cover material in accordance with claim 1 wherein said tab material is hardened or cured by ultra-violet or visible light.

4. (Allowed) A method of making a roofing or building cover material in accordance with claim 1, wherein said nail tabs are formed in a continuous strip.

5. (Allowed) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is deposited on said lamination roll from an engraved print roll positioned in contact with said lamination roll.

6. (Allowed) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is pre-formed before contact with said lamination roll.

7. (Previously amended) A method of making a roofing or building cover material comprising the steps of first depositing nail tab material at a plurality of locations on said roofing or building cover material, said nail tab material is substantially made of a polymer material ~~in a substantially liquid state~~, and subsequently pressure adhering

said nail tab material into nail tabs on said ~~surface~~ roofing or building cover material with a pressure roll.

8. (original) A method of making a roofing or building cover material in accordance with claim 7, wherein said pressure roll has an engraved pattern that presses said tab material in a pre-determined shape.

9. (original) A method of making a roofing or building cover material in accordance with claim 7, wherein said tab material, while existing in a liquid or viscous state, is hardened or cured by means of ultra-violet or visible light.

10. cancelled

11. cancelled

12. cancelled

13. cancelled

14. cancelled

15. cancelled

16. cancelled

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.
12/704,981	02/12/2010	David Allan Collins	FFC-500-003	7359

29281 7590 10/20/2011

JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056

EXAMINER	
FLETCHER III, WILLIAM P	
ART UNIT	PAPER NUMBER
1717	
MAIL DATE	DELIVERY MODE
10/20/2011	PAPER

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.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 12/704,981	**Applicant(s)** COLLINS ET AL.	
	Examiner William Phillip Fletcher III	**Art Unit** 1717	

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

THE REPLY FILED 05 October 2011 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. 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. 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.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. 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) 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 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☒ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☒ Applicant's reply has overcome the following rejection(s): The rejection of claims 7-9 under 35 USC 112, 1st paragraph.
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.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: *1 and 4-9*.
   Claim(s) objected to: _____.
   Claim(s) rejected: *2 and 3*.
   Claim(s) withdrawn from consideration: *10-16*.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a 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).
9. ☐ The affidavit or other evidence filed after the date of filing a 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 a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ 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

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/William Phillip Fletcher III/
Primary Examiner, Art Unit 1717

Continuation of 11. does NOT place the application in condition for allowance because:

I. The proposed amendment will not be entered because it is non-compliant.

II. The terminal disclaimer filed on 10/5/11 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 7,201,946 has been reviewed and is NOT accepted. On the 3.73(b) statement, filed 6/6/11, the name of assignee reads "Assignee." Assignee's name should be cited. Please re-submit the terminal disclaimer with a proper 3.73(b) statement.

The following is a statement of 37 CFR 3.73:

37 CFR 3.73 Establishing right of assignee to take action.

(a) The inventor is presumed to be the owner of a patent application, and any patent that may issue therefrom, unless there is an assignment. The original applicant is presumed to be the owner of a trademark application or registration unless there is an assignment.

(b)(1) In order to request or take action in a patent or trademark matter, the assignee must establish its ownership of the patent or trademark property of paragraph (a) of this section to the satisfaction of the Director. The establishment of ownership by the assignee may be combined with the paper that requests or takes the action. Ownership is established by submitting to the Office a signed statement identifying the assignee, accompanied by either:

(i) Documentary evidence of a chain of title from the original owner to the assignee (*e.g.*, copy of an executed assignment). For trademark matters only, the documents submitted to establish ownership may be required to be recorded pursuant to § 3.11 in the assignment records of the Office as a condition to permitting the assignee to take action in a matter pending before the Office. For patent matters only, the submission of the documentary evidence must be accompanied by a statement affirming that the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant § 3.11; or

(ii) A statement specifying where documentary evidence of a chain of title from the original owner to the assignee is recorded in the assignment records of the Office (*e.g.*, reel and frame number).

(2) The submission establishing ownership must show that the person signing the submission is a person authorized to act on behalf of the assignee by:

(i) Including a statement that the person signing the submission is authorized to act on behalf of the assignee; or

(ii) Being signed by a person having apparent authority to sign on behalf of the assignee, *e.g.*, an officer of the assignee.

(c) For patent matters only:

(1) Establishment of ownership by the assignee must be submitted prior to, or at the same time as, the paper requesting or taking action is submitted.

(2) If the submission under this section is by an assignee of less than the entire right, title and interest, such assignee must indicate the extent (by percentage) of its ownership interest, or the Office may refuse to accept the submission as an establishment of ownership.

DO NOT ENTER: /WPF/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Collins et al.	)	Group Art Unit: 1783
	)	
Appln. Serial No.: 12/704,981	)	Examiner: Fletcher, William P, III
	)	
Filed: 02/12/2010	)	
	)	
For: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips	)	

Response to Final Action

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. § 1.8(a)(1)(i)(C)
Date of Transmission: 5 October 2011
I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office (USPTO) via the USPTO electronic filing system (EFS-Web) on the date shown above.
By: James Petruzzi

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

Sir:

Please enter the following amendment in response to the Final Office Action mailed August 9, 2011.

A shortened statutory period of three months is set to expire November 9, 2011. A reply is being filed within two months of the mailing date of the action.

Claims 1-16 are currently pending in this application. Claims 10 through 16 are cancelled as they pertain to nonelected claims. Claims 1 and 4-6 have been allowed.

Claims 2 and 3 were subject to a terminal disclaimer to overcome a non-statutory non-obviousness-type double patenting rejection. A Statement under 37 CFR 3.73(b) had been submitted by the current owner of the application and a terminal disclaimer has been filed and appropriate fee paid. In view of the rejection of that terminal disclaimer as being signed by an attorney of record but not having previously filed a power of attorney, applicants submit a new terminal disclaimer signed by the President of Fast Felt Corporation, owner of the application, who is empowered to act on behalf of the corporation.

Amendments to the Specification begin on page 3 of this paper.

Amendments to the Claims begin on page 4 of this paper.

Notice of Non-Compliant Amendment (37 CFR 1.121)	Application No.	Applicant(s)	
	12/704,981	COLLINS ET AL.	
	Examiner	Art Unit	
	William Phillip Fletcher III	1717	

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

The amendment document filed on *05 October 2011* is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
  - ☐ A. Amended paragraph(s) do not include markings.
  - ☐ B. New paragraph(s) should not be underlined.
  - ☐ C. Other _____.
- ☐ 2. Abstract:
  - ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
  - ☐ B. Other _____.
- ☐ 3. Amendments to the drawings:
  - ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
  - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
  - ☐ C. Other _____.
- ☒ 4. Amendments to the claims:
  - ☐ A. A complete listing of all of the claims is not present.
  - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
  - ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
  - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
  - ☒ E. Other: *"No claim text shall be presented for any claim in the claim listing with the status of "canceled." 37 CFR 1.121(c)(4)(i)*.
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):

_____

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

   Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

   Failure to timely respond to this notice will result in:
   Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or
   Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

/William Phillip Fletcher III/ Primary Examiner, Art Unit 1717	

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	12/704,981	COLLINS ET AL.	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☐ APPROVED	☒ DISAPPROVED
Date Filed : 10/5/11	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:

Janice Ford

On 3.73(b) statement the name of assignee states "assignee". Assignee's name has to be cited. Resubmit terminal along with proper 3.73(b) statement.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Collins et al.	)	Group Art Unit: 1783
	)	
Appln. Serial No.: 12/704,981	)	Examiner: Fletcher, William P, III
	)	
Filed: 02/12/2010	)	
	)	
For: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips	)	

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By: James Petruzzi

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

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Claims 2 and 3 were subject to a terminal disclaimer to overcome a non-statutory non-obviousness-type double patenting rejection. A Statement under 37 CFR 3.73(b) had been submitted by the current owner of the application and a terminal disclaimer has been filed and appropriate fee paid. In view of the rejection of that terminal disclaimer as being signed by an attorney of record but not having previously filed a power of attorney, applicants submit a new terminal disclaimer signed by the President of Fast Felt Corporation, owner of the application, who is empowered to act on behalf of the corporation.

Amendments to the Specification begin on page 3 of this paper.

Amendments to the Claims begin on page 4 of this paper.

IN THE CLAIMS

1. (Allowed) A method of making a roofing or building cover material, which comprises treating an extended length of substrate comprising the steps of:

Depositing tab material onto the surface of said roofing or building cover material at a plurality of nail tabs from a lamination roll, said tab material bonding to the surface of said roofing or building cover material by pressure between said roll and said surface.

2. (original) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is substantially a polymer material.

3. (original) A method of making a roofing or building cover material in accordance with claim 1 wherein said tab material is hardened or cured by ultra-violet or visible light.

4. (Allowed) A method of making a roofing or building cover material in accordance with claim 1, wherein said nail tabs are formed in a continuous strip.

5. (Allowed) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is deposited on said lamination roll from an engraved print roll positioned in contact with said lamination roll.

6. (Allowed) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is pre-formed before contact with said lamination roll.

7. (Previously amended) A method of making a roofing or building cover material comprising the steps of first depositing nail tab material at a plurality of locations on said roofing or building cover material, said nail tab material is substantially made of a polymer material ~~in a substantially liquid state~~, and subsequently pressure adhering

said nail tab material into nail tabs on said ~~surface~~ roofing or building cover material with a pressure roll.

8. (original) A method of making a roofing or building cover material in accordance with claim 7, wherein said pressure roll has an engraved pattern that presses said tab material in a pre-determined shape.

9. (original) A method of making a roofing or building cover material in accordance with claim 7, wherein said tab material, while existing in a liquid or viscous state, is hardened or cured by means of ultra-violet or visible light.

10. (cancelled) A material, which comprises a substrate or a composite material, and a tab material substantially made of a polymer material deposited onto the surface of said material at a plurality of nail tab locations, said tab material solidifying and adhering to the surface of said base substrate or composite material, wherein said tab material is formed into nail tabs by a pressure roll in contact with said substrate or composite material.

11. (cancelled) A roofing or building cover material in accordance with claim 10, wherein said tab material contains ultra-violet or visible light curing polymers.

12. (cancelled) A roofing or building cover material, which comprises a base substrate material or a saturated or coated material and a plurality of thermoplastic, thermosetting, adhesive or elastomer tabs deposited onto the surface of the base substrate, saturated or coated material at a plurality of nail tabs, wherein said tabs are deposited on said substrate, saturated or coated material by a lamination roll that has pre-formed nail tabs positioned thereon.

13. (cancelled) A roofing or building cover material in accordance with claim 12 wherein said thermoplastic, thermosetting, adhesive or elastomer is pressure adhered to said substrate, saturated or coated material by a pressure roll.

14. (cancelled) A roofing or building cover material in accordance with claim 12 wherein said pre-formed nail tabs are deposited on said lamination roll by a engraved pattern print roll.

15. (cancelled) A roofing or building cover material in accordance with claim 12 wherein said pre-formed nail tabs are stamped on sheet material with adhesive backing.

16. (cancelled) A roofing or building cover material in accordance with claim 12 wherein said pre-formed nail tabs comprise a plurality of layers.

REMARKS

The specification has been amended to reflect that 11/475,455 has issued as U.S. Patent No. 7,666,498 and the addition has been underlined to denote amended material.

Claims 1, 4-6 have been previously allowed.

Claims 2 and 3 were rejected on the ground of nonstatutory obviousness-type double patenting over U.S. Patent No. 7,201,946. A statement under 37 CFR 3.73(b) has been filed by the current owner of the instant application and earlier patent and a terminal disclaimer has been submitted signed by the president of the current owner of the patent application who is empowered to act on behalf of the owner. The appropriate fee was previously paid to overcome this rejection.

Claims 7-9 were rejected under 35 U.S.C. 112 as not being described in the specification sufficiently to convey the inventors were in possession of the claimed invention. Applicants respectfully disagree.

Figure 2 and accompany text at paragraph [000172] on page 16, lines 9-16, desribe and show the deposition of tab material on roofing material 200 and a subsequent pressure step through "press rolls module 204" which applies pressure to the roll after deposition of tab material. Applicant believes that this disclosure and the accompanying figure overcome the 35 U.S.C. 112 objection and demonstrate that the claimed subject matter was disclosed in the specification.

Claims 2, 3, and 7-9 as amended are in condition for allowance with claims 1, and 4-6 having been previously allowed.

The forgoing documents are being filed via the U.S. Patent and Trademark Office's EFS-Web electronic filing system.

Please link this application to Customer No. 29281 so that its status may be checked via the PAIR System.

Dated: October 5, 2011

Respectfully submitted,

/James D Petruzzi 35,644/
James D. Petruzzi, Reg. No. 35,644
Mason & Petruzzi
4900 Woodway
Suite 745
Houston, TX 77056
Customer Number 29281

PTO/SB/26 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	Docket Number (Optional)

In re Application of: Collins, David A. et al.

Application No.: 12/704,981

Filed: 02/12/2010

For: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips

The owner*, East Felt Corporation, of 100 percent interest 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 **prior patent** No. 7,201,946 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. 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 the **prior patent** 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 the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

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 presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☑ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

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.

2. ☐ The undersigned is an attorney or agent of record. Reg. No. _____

/David A. Collins/ — Signature
10/05/2011 — Date

David A. Collins, President of Fast Felt Corporation — Typed or printed name

713 840-9994 — Telephone Number

☑ Terminal disclaimer fee under 37 CFR 1.20(d) included.

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

*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.

Privacy Act Statement

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

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

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

Electronic Acknowledgement Receipt

EFS ID:	11114494
Application Number:	12704981
International Application Number:	
Confirmation Number:	7359
Title of Invention:	Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips
First Named Inventor/Applicant Name:	David Allan Collins
Customer Number:	29281
Filer:	James Daniel Petruzzi
Filer Authorized By:	
Attorney Docket Number:	FFC-500-003
Receipt Date:	05-OCT-2011
Filing Date:	12-FEB-2010
Time Stamp:	12:30:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment After Final	RespFOAimg.pdf	1458258 34e7ed533e3163c88c75352595f13965fc109066	no	7

Warnings:	
Information:	

2	Terminal Disclaimer Filed	sb0026Collinsimg.pdf	830578 6f979e8b7ca4d39ea2009805d02df81e88573bfd	no	2

Warnings:	
Information:	
Total Files Size (in bytes):	2288836

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.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
12/704,981	02/12/2010	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 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			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **10/05/2011**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/YOLANDA A. MIDDLETON/

IN THE SPECIFICATION

Please amend the specification in paragraph 14, line 2 and add the phrase "now issued as U.S. Patent No. 7,666,498" after "2006." Paragraph 14 now reads:

This application is a continuation of divisional application No. 11/475,455 filed June 27, 2006 now issued as U.S. Patent No. 7,666,498 from co-pending application No. 10/855,264 filed May 27, 2004, now issued as U.S. Patent No. 7,201,946 and is related to the following U.S. patent applications: provisional patent application number 60/474,194 titled Machine and Method for Applying Thermoplastics and Adhesives To Roofing Materials with Nail Tabs filed May 29, 2003 and provisional patent application number 60/485,774 titled Machine and Method for Applying Thermoplastics and Adhesives To Roofing Materials with Nail Tabs filed July 9, 2003, which are hereby incorporated by reference as if fully set forth herein.

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/704,981	02/12/2010	David Allan Collins	FFC-500-003	7359

29281 7590 08/09/2011

JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056

EXAMINER	
FLETCHER III, WILLIAM P	
ART UNIT	PAPER NUMBER
1717	
MAIL DATE	DELIVERY MODE
08/09/2011	PAPER

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.

Office Action Summary	Application No.	Applicant(s)	
	12/704,981	COLLINS ET AL.	
	Examiner	Art Unit	
	WILLIAM PHILLIP FLETCHER III	1717	

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

Period for Reply

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

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

Status

1)☒ Responsive to communication(s) filed on *06 June 2011*.

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

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

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *10-16* is/are withdrawn from consideration.

5)☒ Claim(s) *1 and 4-6* is/are allowed.

6)☒ Claim(s) *2,3 and 7-9* is/are rejected.

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

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

Application Papers

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

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

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

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

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

Priority under 35 U.S.C. § 119

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

a)☐ All b)☐ Some * c)☐ None of:

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

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

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

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

Attachment(s)

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

DETAILED ACTION

Response to Amendment

1. The amendment and remarks filed 6 June 2011 are noted with appreciation.

2. Claims 1-16 remain pending.

Election/Restrictions

3. This application contains claims 10-16 drawn to an invention nonelected with traverse in the reply filed on 30 September 2010. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Terminal Disclaimer

4. The terminal disclaimer filed on 6 June 2011, disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 7,201,946, has been reviewed and is NOT accepted.

5. An attorney or agent, not of record, is not authorized to sign a terminal disclaimer in the capacity as an attorney or agent acting in a representative capacity as provided by 37 CFR 1.34 (a). See 37 CFR 1.321(b) and/or (c). See also the filing receipt mailed 2 March 2010 stating *Power of Attorney: None*.

6. It would be acceptable for a person, other than a recognized officer, to sign a terminal disclaimer, provided the record for the application includes a statement that the person is empowered to sign terminal disclaimers and/or act on behalf of the organization.

Accordingly, a new terminal disclaimer which includes the above empowerment statement will be considered to be signed by an appropriate official of the assignee. A separately filed paper referencing the previously filed terminal disclaimer and containing a proper empowerment statement would also be acceptable.

Response to Arguments

7. The arguments filed 6 June 2011 have been fully considered.

A. The objection to the specification is withdrawn in view of the amendment. The Examiner notes that the amendment to the abstract is not strictly compliant with 37 CFR 1.121 since the added material *now issued as U.S. Patent No. 7,666,498* is not underlined. See 37 CFR 1.121(b)(1)(ii) and (b)(2)(ii). **To facilitate compact prosecution, a Notice of Non-Compliant Amendment will not be mailed, but Applicant is requested to submit a properly marked copy of the amendment to the abstract in reply to this Office action.**

B. The obviousness-type double patenting rejection is maintained since the TD filed 6 June 2011 has not been accepted.

C. The rejection under 35 USC 103(a) is withdrawn in view of the amendment. Specifically, the prior art neither teaches nor suggests a process having a first step of depositing nail tab material at a plurality of locations of on roofing or building cover material, followed by pressure adhering the nail tab material into nail tabs on the roofing or building cover material with a pressure roll. In other words, the prior art neither teaches nor suggests post-deposition adhering and shaping on the roofing or building cover material. **It is the**

Examiner's position that claim 7, as amended, is not supported by the originally-filed disclosure (see below).

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 7-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

A. After a careful review of the originally-filed disclosure, the Primary Examiner can find no disclosure of an embodiment in which nail tab material is first deposited on the roofing material and, subsequently, pressure treated while on the roofing material. The closest embodiments would be those illustrated in Figs. 4 & 5, in which nail tab material is first deposited on a transfer substrate and later applied under pressure to the roofing material. Neither of these embodiments disclose the combination of initial deposition on the roofing material (as opposed to a transfer substrate) and subsequent pressure treatment while still on the roofing material (as opposed to being transferred to the roofing material under pressure.

Double Patenting

10. Claims 2 and 3 remain rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 7 and 8 of U.S. Patent No. 7,201,946 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter of the patented claims is fully encompassed by the subject matter of the instant claims such that, in performing the process of the patented claims, one necessarily performs the process of the instant claims.

Allowable Subject Matter

11. Claims 1 and 4-6 remain allowed.

12. The following is a statement of reasons for the indication of allowable subject matter: The prior art neither teaches nor suggests the claimed process in which the nail tabs are applied *from a lamination roll* [i.e., a transfer substrate]*, said tab material bonding to the surface of said roofing or building cover material by pressure between said roll and said surface*.

Conclusion

13. 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 WILLIAM PHILLIP FLETCHER III whose telephone number is (571)272-1419. The examiner can normally be reached on Monday through Friday, 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571) 272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Phillip Fletcher III/
Primary Examiner, Art Unit 1715

8 August 2011

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12704981	COLLINS ET AL.
	Examiner	**Art Unit**
	William P Fletcher III	1715

SEARCHED

Class	Subclass	Date	Examiner
427	508, 186, 188, 256, 428.06, 428.18, 428.2	12/26/2010	/WPF/
52	746.11	12/26/2010	/WPF/

SEARCH NOTES

Search Notes	Date	Examiner
Inventor name search: dbl pat rej of record. EAST.	12/16/2010	/WPF/
EAST	8/11/2011	/WPF/

INTERFERENCE SEARCH

Class	Subclass	Date	Examiner

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S33	11	S30 and ((apply applied application applying deposit deposition depositing deposited coat$3) with pressure)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:54
S32	1064	S27 and (apply applied application applying deposit deposition depositing deposited coat$3) with pressure	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:54
S31	6	S30 and (((transfer $4 laminat$4) near3 (roll substrate)) (liquid near3 polymer$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:53
S30	35	roof$3 and nail adj tab	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:52
S29	5	S26 and S28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:52
S28	149	S27 and (((transfer $4 laminat$4) near3 (roll substrate)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:52

S27	9086	roof$3 and ((nail $1tab) (roof$3 adj tab) (secur$4 near3 (element tab)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/07 16:52
S26	5363	((427/508) or (427/186) or (427/188) or (427/256) or (427/428.06) or (427/428.18) or (427/428.2) or (52/746.11)). CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/08/07 16:52
S25	1	("6451409").PN.	US-PGPUB; USPAT	OR	OFF	2011/06/01 12:12

EAST Search History (Interference)

<This search history is empty>

8/8/11 11:09:21 AM
C:\Documents and Settings\WFletcher\My Documents\EAST\Workspaces\12704981.wsp

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12704981	COLLINS ET AL.
	Examiner	**Art Unit**
	PRASHANT J KHATRI	1783

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

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/28/2010	12/26/2010	08/08/2011						
	1	÷	=	=						
	2	÷	✓	✓						
	3	÷	✓	✓						
	4	÷	=	=						
	5	÷	=	=						
	6	÷	=	=						
	7	÷	✓	✓						
	8	÷	✓	✓						
	9	÷	✓	✓						
	10	÷	N	N						
	11	÷	N	N						
	12	÷	N	N						
	13	÷	N	N						
	14	÷	N	N						
	15	÷	N	N						
	16	÷	N	N						

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	12/704,981	COLLINS ET AL.	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☐ APPROVED	☒ DISAPPROVED
Date Filed : 06 JUN 2011	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:

JAB

NO POA FOUND, THUS THE ATTORNEY IS NOT OF RECORD, FP 14.29.01

U.S. Patent and Trademark Office

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Collins et al.	)	Group Art Unit: 1783
	)	
Appln. Serial No.: 12/704,981	)	Examiner: Fletcher, William P, III
	)	
Filed: 02/12/2010	)	
	)	
For: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips	)	

Response to Office Action

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. § 1.8(a)(1)(i)(C)
Date of Transmission: 6 June 2011
I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office (USPTO) via the USPTO electronic filing system (EFS-Web) on the date shown above.
By: James Petruzzi

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

Sir:

Please enter the following amendment in response to the Office Action mailed December 28, 2010.

Applicants petition for a 3-month extension of time in which to file a response to the Office Action dated December 28, 2010 in the above-identified application for patent. A shortened statutory period for response was set for 3 months. A petition for the extension of three months and payment of $ 555.00 is included.

Claims 1-9 are currently pending in this application. Claims 1 and 4-6 have been allowed. Claims 2 and 3 are subject to a terminal disclaimer to overcome a non-statutory non-obviousness-type double patenting rejection. A Statement under 37 CFR 3.73(b) has been submitted by the current owner of the application and a terminal disclaimer has been filed and appropriate fee paid.

Amendments to the Specification begin on page 3 of this paper.

Amendments to the Claims begin on page 4 of this paper.

Interview summary and Remarks/Arguments begin on page 7 of this paper.

SUMMARY OF INTERVIEW

Applicants thank the Examiner for conducting a telephonic interview on June 1, 2011. Applicants pointed out that the prior art references did no teach or suggest the application of a pressure step after deposition of the nail tab material and that claim 7 would be amended to positively claim a sequence. The Examiner indicated a further search would be conducted but that the cited art did not appear to show or teach such a sequence of steps in the method. Applicants stated they would amend the claim to resolve an antecedent basis and file a terminal disclaimer to resolve the obviousness type double patenting rejection.

REMARKS

The specification has been amended to reflect that 11/475,455 has issued as U.S. Patent No. 7,666,498.

Claims 1, 4-6 have been allowed.

Claims 2 and 3 were rejected on the ground of nonstatutory obviousness-type double patenting over U.S. Patent No. 7,201,946. A statement under 37 CFR 3.73(b) has been filed by the current owner of the instant application and earlier patent and a terminal disclaimer has been filed and the appropriate fee paid to overcome this rejection.

Claims 7-9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lassiter in view of Halley. Applicant respectfully disagrees with this combination. Lassiter teaches a spray on system for applying nail tabs to substrate material but does not teach or suggest the need or use of a subsequent pressure roll step. Indeed, Lassiter teaches the use of "fast-cooling or fast-setting [material] so that it bonds and solidifies to the surface of the saturated felt before it leaves the line area." Col. 5, lines, 45-46. Further, the subsequent wheel 32 taught in Lassiter is "grooved" to "permit the tabs to pass thorugh without being subject to possible scraping action." Col 6, lines 5-7. No pressure step would be desired in conjunction with Lassiter. Halley teaches conventional gravure pressure being applied at or near the time of deposition which is not taught or suggested by Lassiter. There is no teaching of suggestion in Lassiter or Halley to apply the nail tab material first, and then subsequently pressure adhere it to the substrate with a roller.

Claim 7 as amended further distinguishes the prior art by claiming a sequence of method steps in a certain order. The amended claim overcomes the prior art in that Halley teaches a pressure roll that is applied at the same or near the same time as the deposition step. Indeed, such a pressure roll is integral to the conventional process of gravure in drawing the material from the impression roll to deposit the material in the first instance.

Claims 2, 3, and 7-9 as amended are in condition for allowance with claims 1, and 4-6 having been previously allowed.

The forgoing documents are being filed via the U.S. Patent and Trademark Office's EFS-Web electronic filing system.

Please link this application to Customer No. 29281 so that its status may be checked via the PAIR System.

Dated: June 6, 2011

Respectfully submitted,

/James D Petruzzi 35,644/
James D. Petruzzi, Reg. No. 35,644
Mason & Petruzzi
4900 Woodway
Suite 745
Houston, TX 77056
Customer Number 29281

PTO/SB/96 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Fast Felt Corporation

Application No./Patent No.: 12/704,981 Filed/Issue Date: 02/12/2010

Titled: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips

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

states that it is:

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

2. ☐ an assignee of less than the entire right, title, and interest in (The extent (by percentage) of its ownership interest is _____ %); or

3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

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

OR

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

1. From: D. Collins, G. Jackson, M. Madero-O'brien To: LFF Systems, Inc.

The document was recorded in the United States Patent and Trademark Office at
Reel 026376, Frame 0519, or for which a copy thereof is attached.

2. From: LFF Systems, Inc. To: Fast Felt Corporation

The document was recorded in the United States Patent and Trademark Office at
Reel 026381, Frame 0220, or for which a copy thereof is attached.

3. From: _____ To: _____

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

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

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

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

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

/James D. Petruzzi 35644/ — Signature

06/06/2011 — Date

James D. Petruzzi — Printed or Typed Name

Attorney of Record — Title

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.

PTO/SB/26 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT

Docket Number (Optional)

In re Application of: Collins, David A. et al.

Application No.: 12/704,981

Filed: 02/12/2010

For: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips

The owner*, Fast Felt Corporation, of 100 percent interest 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 **prior patent** No. 7,201,946 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. 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 the **prior patent** 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 the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

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 presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

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.

2. ☑ The undersigned is an attorney or agent of record. Reg. No. 35644

/James D. Petruzzi 35644/ — Signature
06/06/2011 — Date

James D. Petruzzi — Typed or printed name

713 840-9994 — Telephone Number

☑ Terminal disclaimer fee under 37 CFR 1.20(d) included.

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

*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.

Privacy Act Statement

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

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

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

Electronic Patent Application Fee Transmittal

Application Number:	12704981
Filing Date:	12-Feb-2010
Title of Invention:	Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips
First Named Inventor/Applicant Name:	David Allan Collins
Filer:	James Daniel Petruzzi
Attorney Docket Number:	FFC-500-003

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

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:				
Statutory or terminal disclaimer	2814	1	70	70
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	2253	1	555	555
Miscellaneous:				
			Total in USD ($)	**625**

Electronic Acknowledgement Receipt

EFS ID:	10240545
Application Number:	12704981
International Application Number:	
Confirmation Number:	7359
Title of Invention:	Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips
First Named Inventor/Applicant Name:	David Allan Collins
Customer Number:	29281
Filer:	James Daniel Petruzzi
Filer Authorized By:	
Attorney Docket Number:	FFC-500-003
Receipt Date:	06-JUN-2011
Filing Date:	12-FEB-2010
Time Stamp:	15:40:46
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Electronic Funds Transfer
Payment was successfully received in RAM	$625
RAM confirmation Number	2302
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Amendment/Req. Reconsideration-After Non-Final Reject	RespOAimg.pdf	1937556 36f5f18a90231a0a69304008b28abc402fc1089e	no	8
Warnings:					
Information:					
2	Assignee showing of ownership per 37 CFR 3.73(b).	37CFR373b.pdf	427972 a64c485bfc849ef076a9b46b794e0a19c61964f0	no	2
Warnings:					
Information:					
3	Terminal Disclaimer Filed	sb0026.pdf	212539 75aa5c81ad52fb6409b5038f38c5e9bb7076bed2	no	2
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	32033 0c366cce1fcadd08b73546a6268869d8448c62fb	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	2610100		

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.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
12/704,981	02/12/2010	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 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			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	06/06/2011	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 16	Minus	** 20	= 0	X $26 =	0	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 4	Minus	***3	= 1	X $110 =	110	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	110	OR	TOTAL ADD'L FEE	

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/CURTIS NELLOMS JR/

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

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

IN THE SPECIFICATION

Please amend the specification in paragraph 14, line 2 and add the phrase "now issued as U.S. Patent No. 7,666,498" after "2006." Paragraph 14 now reads:

This application is a continuation of divisional application No. 11/475,455 filed June 27, 2006 now issued as U.S. Patent No. 7,666,498 from co-pending application No. 10/855,264 filed May 27, 2004, now issued as U.S. Patent No. 7,201,946 and is related to the following U.S. patent applications: provisional patent application number 60/474,194 titled Machine and Method for Applying Thermoplastics and Adhesives To Roofing Materials with Nail Tabs filed May 29, 2003 and provisional patent application number 60/485,774 titled Machine and Method for Applying Thermoplastics and Adhesives To Roofing Materials with Nail Tabs filed July 9, 2003, which are hereby incorporated by reference as if fully set forth herein.

IN THE CLAIMS

1. (Allowed) A method of making a roofing or building cover material, which comprises treating an extended length of substrate comprising the steps of:

Depositing tab material onto the surface of said roofing or building cover material at a plurality of nail tabs from a lamination roll, said tab material bonding to the surface of said roofing or building cover material by pressure between said roll and said surface.

2. (original) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is substantially a polymer material.

3. (original) A method of making a roofing or building cover material in accordance with claim 1 wherein said tab material is hardened or cured by ultra-violet or visible light.

4. (Allowed) A method of making a roofing or building cover material in accordance with claim 1, wherein said nail tabs are formed in a continuous strip.

5. (Allowed) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is deposited on said lamination roll from an engraved print roll positioned in contact with said lamination roll.

6. (Allowed) A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is pre-formed before contact with said lamination roll.

7. (Currently amended) A method of making a roofing or building cover material comprising the steps of first depositing nail tab material at a plurality of locations on said roofing or building cover material, said nail tab material is substantially made of a polymer material ~~in a substantially liquid state~~, and subsequently pressure adhering

said nail tab material into nail tabs on said ~~surface~~ roofing or building cover material with a pressure roll.

8. (original) A method of making a roofing or building cover material in accordance with claim 7, wherein said pressure roll has an engraved pattern that presses said tab material in a pre-determined shape.

9. (original) A method of making a roofing or building cover material in accordance with claim 7, wherein said tab material, while existing in a liquid or viscous state, is hardened or cured by means of ultra-violet or visible light.

10. (previously withdrawn) A material, which comprises a substrate or a composite material, and a tab material substantially made of a polymer material deposited onto the surface of said material at a plurality of nail tab locations, said tab material solidifying and adhering to the surface of said base substrate or composite material, wherein said tab material is formed into nail tabs by a pressure roll in contact with said substrate or composite material.

11. (previously withdrawn) A roofing or building cover material in accordance with claim 10, wherein said tab material contains ultra-violet or visible light curing polymers.

12. (previously withdrawn) A roofing or building cover material, which comprises a base substrate material or a saturated or coated material and a plurality of thermoplastic, thermosetting, adhesive or elastomer tabs deposited onto the surface of the base substrate, saturated or coated material at a plurality of nail tabs, wherein said tabs are deposited on said substrate, saturated or coated material by a lamination roll that has pre-formed nail tabs positioned thereon.

13. (previously withdrawn) A roofing or building cover material in accordance with claim 12 wherein said thermoplastic, thermosetting, adhesive or elastomer is pressure adhered to said substrate, saturated or coated material by a pressure roll.

14. (previously withdrawn) A roofing or building cover material in accordance with claim 12 wherein said pre-formed nail tabs are deposited on said lamination roll by a engraved pattern print roll.

15. (previously withdrawn) A roofing or building cover material in accordance with claim 12 wherein said pre-formed nail tabs are stamped on sheet material with adhesive backing.

16. (previously withdrawn) A roofing or building cover material in accordance with claim 12 wherein said pre-formed nail tabs comprise a plurality of layers.

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.
12/704,981	02/12/2010	David Allan Collins	FFC-500-003	7359

29281 7590 06/02/2011

JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056

EXAMINER	
FLETCHER III, WILLIAM P	
ART UNIT	PAPER NUMBER
1717	
MAIL DATE	DELIVERY MODE
06/02/2011	PAPER

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.

Interview Summary	Application No.	Applicant(s)	
	12/704,981	COLLINS ET AL.	
	Examiner	Art Unit	
	WILLIAM PHILLIP FLETCHER III	1717	

All participants (applicant, applicant's representative, PTO personnel):

(1) *WILLIAM PHILLIP FLETCHER III (Primary Examiner)*. (3)_____.

(2) *JAMES D PETRUZZI (Reg. No. 35,644)*. (4)_____.

Date of Interview: *01 June 2011*.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☒ No.
If Yes, brief description: _____.

Claim(s) discussed: *7*.

Identification of prior art discussed: *Prior art of record applied against claim 7*.

Agreement with respect to the claims f)☒ was reached. g)☐ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *Applicant will amend claim 7 to overcome the cited prior art, which applies pressure during application, to require that the pressure be applied *after* application. The Primary Examiner advised the further consideration and search of the prior art would be required. Applicant will also amend to correct the lack of antecedent basis for "said surface" and file a terminal disclaimer to overcome the obviousness-type double patenting rejection in view of US 7201946 B2* .

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

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. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/WILLIAM PHILLIP FLETCHER III/ Primary Examiner, Art Unit 1717	

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/704,981	02/12/2010	David Allan Collins	FFC-500-003	7359

29281 7590 12/28/2010

JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056

EXAMINER	
FLETCHER III, WILLIAM P	
ART UNIT	PAPER NUMBER
1715	
MAIL DATE	DELIVERY MODE
12/28/2010	PAPER

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.

Office Action Summary	Application No.	Applicant(s)	
	12/704,981	COLLINS ET AL.	
	Examiner	Art Unit	
	William P. Fletcher III	1715	

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

Period for Reply

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

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

Status

1)☒ Responsive to communication(s) filed on *30 September 2010*.

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

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

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) *10-16* is/are withdrawn from consideration.

5)☒ Claim(s) *1 and 4-6* is/are allowed.

6)☒ Claim(s) *2,3 and 7-9* is/are rejected.

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

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

Application Papers

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

10)☒ The drawing(s) filed on *12 February 2010* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

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

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

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

Priority under 35 U.S.C. § 119

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

a)☐ All b)☐ Some * c)☐ None of:

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

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

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

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

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/22/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. This application is a continuation of 11/475,455, filed 27 June 2006, now US 7,666,498, which is a divisional of 10/855,264, filed 27 May 2004, now 7,201,946.

Election/Restrictions

2. Applicant's election with traverse of claims 1-9 in the reply filed on 30 September 2010 is acknowledged. The traversal is on the ground(s) that no undue burden exists in examining both inventions. This is not found persuasive because the undue burden on the Primary Examiner arises from the patentability issues associated with, and evolving as a result of, searching additional inventions. Issues related to a process are frequently very different from those related to an article. For example, the issues related to the structural requirements of an article need not be familiar to an examiner of specific processes. Consequently, examination of both inventions represents an undue burden on the Primary Examiner.

The requirement is still deemed proper and is therefore made FINAL.

3. Claims 10-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 30 September 2010.

Information Disclosure Statement

4. The IDS filed 22 March 2010 has been considered by the Primary Examiner.

Drawings

5. The drawings were received on 12 February 2010. These drawings are acceptable.

Specification

6. The disclosure is objected to because of the following informalities: The cross-reference to related applications should be updated to reflect that 11/475,455 has issued as 7,666,498.

Appropriate correction is required.

Double Patenting

7. Claims 2 and 3 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 7 and 8 of U.S. Patent No. 7,201,946 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter of the patented claims is fully encompassed by the subject matter of the instant claims such that, in performing the process of the patented claims, one necessarily performs the process of the instant claims.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lassiter (US 6,451,409 B1) in view of Halley et al. (WO 98/06891 A1).

A. Claim 7

i. Lassiter teaches a process for the formation of integral nail tabs on the surface of a roofing cover by application of a polymer material in a liquid (i.e., melted) state [abstract; 3:31-34 & 37-42; 5:44-47].

ii. Lassiter teaches that the polymer material is applied via nozzles **26**; so it does not expressly state that the polymer material is *pressure adhered on said surface with a pressure roll*. While much of Lassiter's disclosure concerns process parameters for achieving deposition via the nozzles, it is clear that any means, known in the art, for depositing the polymer that would achieve the same result could be successfully substituted.

iii. Halley teaches a process in which a polymeric material is applied to a substrate in a specific pattern in which the pattern is applied under the pressure of pressure roller **28** and gravure roller **30** [¶ bridging pages 8-9 and the second ¶ on page 10].

iv. It would have been obvious to one skilled in the art to modify the process of Lassiter to substitute for the nozzles, a pressure-gravure roller arrangement like that of Halley, in order to apply the polymeric coating material. One skilled in the art would have been motivated to do so by the desire and expectation of successfully applying the polymeric material to form integral nail tabs in a desired pattern on the substrate. It is the Primary Examiner's position that pressure combination of rollers **28** and **30** reads on the claimed *pressure adhering said nail tab material into nail tabs on said surface with a pressure roll*.

B. Claim 8 While roll **28**, which is identified as the "pressure roller" does not have an engraved pattern, it is the Primary Examiner's position that it is the pressure arising from the combination of rolls **28** and **30**, that results in the application of polymeric material. Consequently, gravure roller **30**, which has an engraved surface, serves to *press said tab material in a pre-determined shape*.

C. Claim 9 As set forth in the Office action mailed 23 March 2006 in 10/855,264, insofar as a hot melt polymeric material is disclosed and hot melt materials cure by cooling under ambient conditions, as well as the fact that

visible light is present in such ambient conditions, the hot melt material may be said to be *hardened or cured by means of ultra-violet or visible light*.

Allowable Subject Matter

11. Claims 1 and 4-6 are allowed.

12. The following is a statement of reasons for the indication of allowable subject matter: The prior art neither teaches nor suggests the claimed process in which the nail tabs are applied *from a lamination roll* [i.e., a transfer substrate]*, said tab material bonding to the surface of said roofing or building cover material by pressure between said roll and said surface*.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4,554,196 A; US 4,627,207 A; US 4,641,472 A; US 4,649,686 A; US 4,885,887 A; US 4,932,171 A; US 5,365,709 A; and US 5,469,671 A; are representative of the state of the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Monday through Friday, 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Phillip Fletcher III/
Primary Examiner, Art Unit 1715

26 December 2010

Notice of References Cited	Application/Control No. 12/704,981	Applicant(s)/Patent Under Reexamination COLLINS ET AL.	
	Examiner William P. Fletcher III	Art Unit 1715	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-7,201,946 B2	04-2007	Collins et al.	427/428.06
*	B	US-6,451,409 B1	09-2002	Lassiter, Robert F.	428/147
*	C	US-4,554,196 A	11-1985	Meeker, Brian L.	428/67
*	D	US-4,627,207 A	12-1986	Young et al.	52/361
*	E	US-4,624,721 A	11-1986	Sadler et al.	156/92
*	F	US-5,365,709 A	11-1994	Lassiter, Robert F.	52/408
*	G	US-5,469,671 A	11-1995	Rathgeber et al.	52/58
*	H	US-4,932,171 A	06-1990	Beattie, Doug J.	52/58
*	I	US-4,885,887 A	12-1989	Simmons et al.	52/410
*	J	US-4,649,686 A	03-1987	Backenstow et al.	52/509
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N	WO 98/06891 A1	02-1998	WIPO	Halley et al.	-----
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

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

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

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CONFIRMATION NO. 7359

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/704,981	02/12/2010	428	1783	FFC-500-003

APPLICANTS

David Allan Collins, Houston, TX;
George William Jackson, Houston, TX;
Miguel E. Madero O'Brien, Mexico City, MEXICO;

**** CONTINUING DATA ***************************

This application is a CON of 11/475,455 06/27/2006 PAT 7,666,498
which is a DIV of 10/855,264 05/27/2004 PAT 7,201,946
which claims benefit of 60/474,194 05/29/2003
and claims benefit of 60/485,774 07/09/2003

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
02/25/2010

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☐ No Verified and Acknowledged /WILLIAM PHILLIP FLETCHER III/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		TX	10	16	4

ADDRESS

JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056
UNITED STATES

TITLE

Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips

FILING FEE RECEIVED	FEES: Authority has been given in Paper	☐ All Fees
572	No._____ to charge/credit DEPOSIT ACCOUNT	☐ 1.16 Fees (Filing)
	No._____ for following:	☐ 1.17 Fees (Processing Ext. of time)
		☐ 1.18 Fees (Issue)
		☐ Other _____
		☐ Credit

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
12704981 1	12704981	COLLINS ET AL.
	Examiner	Art Unit
	PRASHANT J KHATRI	1783

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

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/28/2010	12/26/2010							
	1	÷	=							
	2	÷	✓							
	3	÷	✓							
	4	÷	=							
	5	÷	=							
	6	÷	=							
	7	÷	✓							
	8	÷	✓							
	9	÷	✓							
	10	÷	N							
	11	÷	N							
	12	÷	N							
	13	÷	N							
	14	÷	N							
	15	÷	N							
	16	÷	N							

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
12704981	12704981	COLLINS ET AL.
	Examiner	**Art Unit**
	William P Fletcher III	1715

SEARCHED			
Class	**Subclass**	**Date**	**Examiner**
427	508, 186, 188, 256, 428.06, 428.18, 428.2	12/26/2010	/WPF/
52	746.11	12/26/2010	/WPF/

SEARCH NOTES		
Search Notes	**Date**	**Examiner**
Inventor name search: dbl pat rej of record. EAST.	12/16/2010	/WPF/

INTERFERENCE SEARCH			
Class	**Subclass**	**Date**	**Examiner**

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	15	("3779373" | "3841474" | "3904032" | "4033499" | "4554196" | "4624721" | "4627207" | "4641472" | "4788807" | "5130178" | "5309685" | "5365709" | "5407313" | "5415511" | "5469671").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2010/12/26 14:47
L3	8	(("4885887") or ("4932171") or ("3900102")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/12/26 14:52
L4	2	("4649686").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/12/26 14:55
L5	5090	((427/508) or (427/186) or (427/188) or (427/256) or (427/428.06) or (427/428.18) or (427/428.2) or (52/746.11)).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/12/26 15:02
L6	8748	roof$3 and ((nail$1tab) (roof$3 adj tab) (secur$4 near3 (element tab)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:04
L7	337	6 and (((transfer$4 laminat $4) near3 (roll substrate)) (liquid near3 polymer$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:05
L8	145	6 and (((transfer$4 laminat $4) near3 (roll substrate)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:06

L9	5	5 and 8	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:06
L10	127	roof$3 and ((nail$1tab) (roof$3 adj tab))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:06
L11	3	10 and (((transfer$4 laminat$4) near3 (roll substrate)) (liquid near3 polymer$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:06
L12	3	roof$3 and nail$1tab	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:14
L13	35	roof$3 and nail adj tab	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:15
L14	6	13 and (((transfer$4 laminat$4) near3 (roll substrate)) (liquid near3 polymer$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:16
L15	29	13 not 14	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 15:17
L16	1	("6531027").PN.	US-PGPUB; USPAT	OR	OFF	2010/12/26 15:31
L17	1	("6451409").PN.	US-PGPUB; USPAT	OR	OFF	2010/12/26 15:48
L18	1	("20030215594").PN.	US-PGPUB; USPAT	OR	OFF	2010/12/26 15:58

L19	23	((engraved gravure) near3 roller) same ((liquid molten) with polymer$3) same pressure	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 16:16
L20	20	((pattern$3 (reverse adj gravure)) near3 roller) same ((liquid molten) with polymer$3) same pressure	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 16:23
L21	514	(pattern$3 engrav$3 gravure (reverse adj gravure)) near3 (pressure adj roll$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 16:26
L22	8	21 same ((liquid molten) with polymer$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/26 16:26
S1	2	(("7666498") or ("7201946")).PN.	USPAT	OR	OFF	2010/12/21 13:32
S2	4	nail$1tab	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/23 15:58
S3	12	(("4554196") or ("5365709") or ("6451409") or ("6033723") or ("6531027") or ("6210757") or ("3003906") or ("4618528") or ("4624721") or ("5599586") or ("20030215594") or ("20030203145")).PN.	US-PGPUB; USPAT	OR	OFF	2010/12/23 16:04

EAST Search History (Interference)

<This search history is empty>

12/26/10 6:48:14 PM
C:\Documents and Settings\WFletcher\My Documents\EAST\Workspaces\12704981.wsp

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12704981
Filing Date	2010-02-12
First Named Inventor	Collins, David
Art Unit	3633
Examiner Name	unknown
Attorney Docket Number	FFC-500-003

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4554196		1985-11-19	Meeker	passim
	2	5365709		1994-11-22	Lassiter	passim
	3	6451409		2002-09-17	Lassiter	passim
	4	6033723		2000-03-07	Kistler et al.	passim
	5	6531027		2003-03-11	Lender et al.	passim
	6	6210757		2001-04-14	Taylor et al.	passim
	7	3003906		1961-10-10	Arthur Fasold George et al.	passim
	8	4618528		1986-10-21	Sacks et al.	passim

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /WPF/

Receipt date: 03/22/2010	Application Number	12704981	12704981 - GAU: 1715
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**	Filing Date	2010-02-12	
	First Named Inventor	Collins, David	
	Art Unit	3633	
	Examiner Name	unknown	
	Attorney Docket Number	FFC-500-003	

	9	4624721		1986-11-25	Sadler et al.	pasim
	10	5599586		1997-02-04	Israel	passim

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	1	20030215594		2003-11-20	Hamdar et al.	passim
	2	20030203145		2003-10-30	Zanchetta et al.	passim

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	1	023609	EP		1986-12-03	Jensen et al.	passim	☐
	2	WO9729256	WO		1997-08-14	Van Cleemput	passim	☐

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Receipt date: 03/22/2010	Application Number	12704981	12704981 - GAU: 1715
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**	Filing Date	2010-02-12	
	First Named Inventor	Collins, David	
	Art Unit	3633	
	Examiner Name	unknown	
	Attorney Docket Number	FFC-500-003	

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Examiner Signature	/William Phillip Fletcher III/	Date Considered	12/23/2010

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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : D06N 3/04, 3/18, B32B 27/12, A41D 31/02 — A1

(11) International Publication Number: **WO 98/06891**

(43) International Publication Date: 19 February 1998 (19.02.98)

(21) International Application Number: PCT/GB97/02172

(22) International Filing Date: 12 August 1997 (12.08.97)

(30) Priority Data:
9617181.4 15 August 1996 (15.08.96) GB

(71) Applicant *(for all designated States except US)*: W.L. GORE & ASSOCIATES (UK) LTD. [GB/GB]; 1 Bell Yard, London WC2A 2JP (GB).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: HALLEY, David, George [GB/GB]; Wester Lie, Main Street, St. Bothwells TD6 0AR (GB). CLARKSON, George [GB/GB]; 46 Sheriff Park, Linlithgow, W. Lothian EH49 7SS (GB). TROUBA, John, Edward [US/US]; 4 Sullivan Chase Drive, Avondale, PA 19311 (US).

(74) Agents: McCALLUM, William, Potter et al.; Cruikshank & Fairweather, 19 Royal Exchange Square, Glasgow G1 3AE (GB).

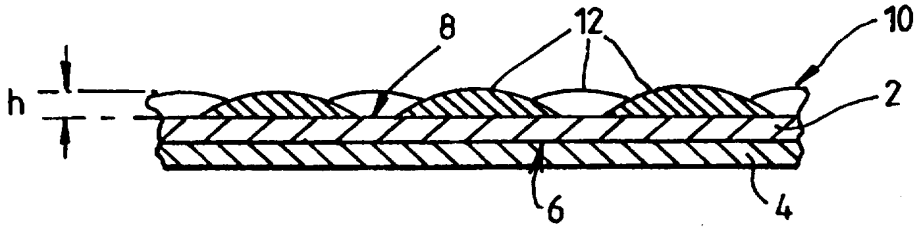
(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

Published
With international search report.

(54) Title: WATER-VAPOUR-PERMEABLE COMPOSITE MATERIAL

(57) Abstract

The invention relates to a composite lining material for a garment or the like comprising a water resistant water-vapour-permeable flexible substrate (2) having a fabric (4) secured to a first side of the substrate (2). A second side of the substrate (2) is provided with an abrasion resisting discontinuous layer (10) made up of a plurality of discrete abrasion resisting polymeric dots (12). The dots (12) prevent abrasion of the flexible substrate (2) and, in use, form a lining for the material.



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WATER-VAPOUR-PERMEABLE COMPOSITE MATERIAL

The present invention relates to a flexible water-resistant water-vapour-permeable composite material, particularly for use in garments, which exhibits a combination of good breathability (i.e. water vapour transmission) and good durability.

Water-vapour-permeable laminate materials which are resistant to liquid water penetration are known from US patents 3,953,566 and 4,194,041 (W. L. Gore & Associates Inc.) US Patent No. 3,953,566 refers to the production of an expanded porous polytetrafluoroethylene (PTFE) membrane. Such membranes generally have intrinsically poor abrasion resistance. US Patent No. 4,194,041 discloses a material which comprises a porous membrane (particularly expanded PTFE) provided on one surface thereof with a continuous layer of a hydrophilic material which is water-vapour-permeable, such as a hydrophilic polyurethane which has poor abrasion resistance. Other water-resistant water-vapour-permeable materials also having poor abrasion resistance are also commercially available and these include polyurethane coatings applied to a fabric, polyurethane membranes laminated to a fabric, and polyester membrane-fabric combinations.

Such materials often include an inner liner which protects against abrasion the polyurethane-coated face of the material in use. The preformed liner is generally laminated to the polyurethane-coated face by means of a layer of adhesive. However, the liner adds to the cost, weight and bulk of the material. In some applications, it may be desirable to eliminate the liner. However, this has the disadvantage of exposing the soft hydrophilic polyurethane directly to abrasive forces.

US Patent No. 5,026,591 discloses coating a

scaffold material (expanded PTFE or microporous polypropylene) with a continuous coating of a hydrophilic material (hot melt hydrophilic polyurethane or polyurethane acrylate) and pressing directly into the coating a substrate (a polyamide non-woven, a polycotton woven blend etc.) and then allowing the coating to cure. The objective is to provide a continuous coating of hydrophilic material without any leaks therein, sandwiched between the scaffold material and the substrate.

US Patent No. 4,925,732 discloses the production of a laminate for making shoes composed of a pair of moisture permeable materials (e.g. leather and fabric) adhered together by means of a moisture permeable adhesive (e.g. a polyurethane adhesive).

European Patent No. 0465817 discloses a laminate for use as a protective material comprising an expanded PTFE liquid barrier layer, having a water-vapour permeable adhesive layer thereon, and active carbon beads and a net partially embedded in the adhesive layer. The net however remains above the surface of the adhesive so as to protect the active carbon beads from being mechanically dislodged. The net thickness is typically about 0.5 mm (500 microns).

Water-resistant materials which resist liquid water penetration are well known to persons skilled in the art of making rainwear. Clearly, the degree of water-resistance required in a so-called waterproof garment depends upon the severity of the climatic conditions to which it is subjected. A suitable test of water-resistance (Suter test) is described herein. An acceptable practical indication of water-resistance is one in which there is no evidence of water being forced through a sample by a pressure of 1.4 pounds per square inch (0.1kg/cm^2), or more typically 2.0 pounds per square inch (0.14kg/cm^2). This also gives a measure of hydrophobicity in respect of porous materials.

The benefit of a water-vapour-permeable material is that perspiration from the wearer's body is allowed to escape from within the garment by passage through the material, thus preventing build-up of liquid water within the garment and consequent clammy feeling. In order to be considered as water-vapour-permeable, the flexible substrate should generally have a water-vapour-permeability of at least 1,000, preferably greater than 1500 and more preferably greater than 3000 g/m^2/day. However, values in excess of 100,000 g/m^2/day are possible with certain substrates. The overall water-vapour-permeability of the flexible composite material of the present invention will usually be somewhat lower than this (e.g. 5,000 to 12,000 g/m^2/day or up to 30,000 g/m^2 for certain substrates) but generally speaking its water-vapour-permeability may also be within the ranges outlined above.

A suitable water-resistant water-vapour-permeable flexible membrane is disclosed in US Patent No. 3,953,566 which discloses a porous expanded polytetrafluoroethylene (PTFE) material. The expanded porous PTFE has a micro-structure characterised by nodes interconnected by fibrils. If necessary, the water-resistance may be enhanced by impregnating the expanded PTFE with an hydrophobic impregnant (such as a low molecular weight perfluoro compound, for example a perfluoroalkyl acrylate or methacrylate). Such impregnants are also oleophobic. The impregnants can coat the nodes and fibrils of the porous PTFE.

The water-resistant water-vapour-permeable membrane might also be a microporous material such as a high molecular weight microporous polyethylene or polypropylene, microporous polyurethanes or polyesters.

In addition, the water-resistant water-vapour-permeable flexible membrane may include a coating of a water-resistant water-vapour-permeable hydrophilic film of the type disclosed in US Patent No. 4,194,041, the

membrane and hydrophilic film together forming a substrate. Such hydrophilic films are generally also oleophobic. The flexible membrane may be formed of porous expanded PTFE as described in US Patent No. 3,953,566.

Such materials as described are essentially conventional.

It is an object of the present invention to provide good abrasion resistance in water-resistant water-vapour-permeable composite materials, without the need for a protective liner.

According to the present invention there is provided a composite lining material for a garment or the like comprising

(a) a water-resistant, water-vapour-permeable, flexible substrate having a first and second side;

(b) a fabric secured to said first side of the substrate; and

(c) a plurality of discrete abrasion-resisting polymeric dots forming a discontinuous lining-forming pattern over the surface of said second side of the substrate and which dots resist abrasion of the flexible substrate.

According to a further aspect of the present invention the composite material is embodied in garments such as hats, gloves or shoes.

According to a still further aspect of the present invention there is provided a process of producing a composite lining material for a garment or the like comprising securing a fabric to a first side of a flexible, water-resistant, water-vapour-permeable substrate, and applying a plurality of abrasion-resisting polymeric dots to a second side of said substrate in order to form a discontinuous lining-forming pattern over the surface of said second side to resist abrasion of the flexible substrate.

The contribution made by the present invention is

to provide a discontinuous abrasion-resisting lining-forming layer over the flexible substrate material so as to provide a protective surface layer which protects the water-vapour-permeable flexible substrate from abrasion forces in a particularly lightweight, convenient and economical manner. Thus, it is surprisingly found that the application of an abrasion resisting layer, comprising a discontinuous pattern of abrasion-resisting polymeric material is in itself sufficient to provide abrasion resistance and durability, without the need to apply the conventional inner liner. The abrasion-resisting polymeric material constitutes the surface layer of the composite material and is the layer which is innermost when the material is used to form a garment, that is to say it is the surface layer which is closest to the skin of the wearer. It has been surprisingly found that the discontinuous pattern of abrasion-resisting material, whilst providing the necessary moisture vapour permeability, is sufficient to resist abrading of the material during flexing thereof, both against itself and against any other materials which may be present (for example other garments worn by the wearer).

For the purposes of the present invention, it is preferable that, for a given polymer, the resistance to abrasion is greater for a lining formed by polymeric dots which have a smooth, rounded, non-angular external surface. Also, smooth rounded dots, when constituting the innermost lining surface of a garment, will present a more comfortable feel to the wearer and avoid snagging of the skin or any inner clothing worn by the wearer.

Embodiments of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:-

Fig. 1 is a fragmentary plan view, to an enlarged scale of a first embodiment of a composite lining material in accordance with the invention;

Fig. 2 is a diagrammatic cross-sectional view on the line A-A of Fig. 1;

Fig. 3 is a diagrammatic cross-sectional view similar to Fig. 2 of a second embodiment of the present invention;

Fig. 4 is a perspective view from above of an image produced from a Scanning Electron Microscope (SEM) of a composite lining material incorporating polymeric dots in accordance with the invention;

Fig. 5 is a vertical sectional view of an image produced from a Scanning Electron Microscope of a polymeric dot on a composite lining material in accordance with the invention; and

Fig. 6 is a schematic illustration of a coating apparatus for applying, in accordance with the invention, an abrasion-resisting polymeric material onto a substrate.

Referring to Figs. 1 and 2 of the drawings, a composite lining material comprises a waterproof, water-vapour-permeable flexible substrate 2 having a face fabric 4 adhered to one side 6 of the substrate 2. A second side 8 of the substrate 2 has firmly adhered thereto an abrasion-resisting, discontinuous lining-forming layer 10 made up of a plurality of discrete, substantially smooth-surfaced non-angular dots 12 of an abrasion-resisting polymeric material such as an abrasion-resisting polyurethane and which dots project from the side 8 of the substrate 2. The polymer from which the dots are made should have an elastic modulus of greater than about 800 psi (5.5 Nmm^{-2}) in order to provide the desired abrasion resistance.

The flexible substrate 2 is composed of an expanded polytetrafluoroethylene (PTFE) membrane as disclosed in aforementioned US Patent No. 3,953,566 and which PTFE has a porous microstructure characterised by nodes interconnected by fibrils. The membrane 2 is resistant to passage of liquid water therethrough but is water-

vapour-permeable. The membrane 2 has a weight of 15g/m^2 and a maximum pore size of 0.2 microns determined by known bubble point measurement techniques such as that described in US Patent No. 5026591 (Henn).

The face fabric 4 is laminated to side 6 of substrate 2 by any conventional means and the face fabric 4 can be one of a number of known face fabrics such as a woven, non-woven or knitted fabric of a material such as nylon or polyester. In use, the face fabric constitutes the outer surface of a garment formed from the composite material and provides the required visual or aesthetic appearance and the necessary mechanical properties.

Each of the polyurethane dots 12 is substantially circular in plan view as shown in Fig. 1 and part-spherical in cross-section as shown in Fig. 2 defined by an arc having a radius of the order of about 400 microns. In the present embodiment the dots 12 are arranged in repeat regular pattern of seven dot rosettes, i.e. six dots are arranged around a central seventh dot. The rosettes are identified by the imaginary dotted lines in Fig. 1. Each dot 12 has a cross dimension in the plane of the substrate constituted by a diameter d of the order of 500 microns and a height of around 100 microns. The centres of the six dots 12 around their associated central dot lie on a circle having a diameter D of the order of about 1500 say 1460 microns and the distance or pitch between the centres of adjacent dots is of the order of 750 microns, i.e. the distance between the periphery of adjacent dots is about half of the dot diameter. The ratio of the distance between adjacent dot centres, the dot diameter and the dot height is for example with the range of 7.5:5:1 to 15:10:1. The dots 12 in the pattern of Fig. 1 occupy approximately 40% of the surface area of the composite material to which they are applied. All the foregoing measurements were taken from an image produced

by a Scanning Electron Microscope.

Fig. 3 illustrates a second embodiment of the invention which is similar to the embodiment described above with reference to Figs. 1 and 2 and the same reference numerals are given to equivalent components of Figs. 1 and 2. The embodiment of Fig. 3 involves the incorporation of an additional hydrophilic coating 14 of a water-resistant water-vapour permeable material such as a water-vapour-permeable polyurethane of the type disclosed in aforementioned US Patent No. 4,194,041.

Fig. 4 illustrates a third embodiment of the invention as viewed by a Scanning Electron Microscope showing a substrate 14 provided with a plurality of polymeric dots 16 arranged in parallel rows. Each dot 16 is generally circular in plan as can be seen from Fig. 4 and has a plurality of minor perforations 17 in its surface created during formation of the dots.

Fig. 5 illustrates, to an enlarged scale, a vertical section of one of the dots 16 of Fig. 4 and it is apparent that the outline of the dot 16 is substantially part-spherical in vertical section and has a hollow interior 18.

Fig. 6 illustrates diagrammatically one form of coating apparatus suitable for applying a layer of abrasion resisting polymeric dots to a flexible substrate to produce a composite material as described above with reference to Fig. 1 to 3. The construction of the apparatus and its mode of operation follow the general disclosure of US Patent No. 5,026,591.

Referring to Fig. 6, a roll 20 of expanded PTFE membrane to which is laminated a face fabric formed of woven texturised nylon or woven polyester is unwound and fed as a web 22 of width 140 cm. to 150 cm over a brake roller 24 which serves to apply a constant tension thereto and then into the nip between a pressure roller 28 and a gravure roller 30. The gravure roller 30 has a seven dot rosette pattern of surface recesses therein

for receiving liquid polymeric material and applying this in the form of a pattern of discrete polymeric dots to the web 22 of substrate membrane. The liquid polymeric layer is a reactive hot-melt hydrophilic polyurethane (designated and hereinafter referred to as OLC-5T) prepared according to Example 1 of US Patent No. 5,209,969). The polyurethane OLC-5T when cured is tough and abrasion-resistant having an elastic modulus of greater than 800 psi (5.5 Nmm^{-2}). The liquid polymeric material is applied at a temperature of 40 to 80°C on to the gravure roller 30 having a temperature of 40 to 80°C by means of a doctor blade assembly 32 held at a temperature of between 40 and 80°C which applies the liquid polymeric material to the surface of the gravure roller 30 and wipes excess material therefrom, such that the recesses in the surface of the gravure roller 30 are filled with liquid polymeric material. Further rotation of the roller 30 enables the polymeric material to be gravure printed on to one side of the web 22 of substrate membrane.

The membrane with the applied polymeric layer of discrete dots is then passed over an oil-filled hot roller 36 where the oil temperature is between 160°C and 200°C which effects curing of the polymeric material at an elevated temperature of between 160 and 200°C. The composite material so formed is then fed over a series of idler rolls 38. Cooling occurs as the composite material passes over cooling can 42 which is typically filled with cold water. The composite material is hauled off over further idler rollers 44 and load cell rollers 46 which monitor tension at around 100 to 400 N in the continuous web of composite material and by which time the abrasion-resisting polymeric dots have at least partially cured to a solid mass, thereby allowing the composite material to be rolled up onto a core. The continuous substrate is passed through the coating apparatus at a speed of about 7 to 15m/min.

It will be appreciated that the embodiments described with reference to Figs. 1 to 5 and the method described with reference to Fig. 6 are examples only of the present invention and that variations are possible within the scope of the invention as set out below.

It has been found desirable to lay down the dots 12 of abrasion-resisting polymeric material directly onto the flexible substrate 2 such as to form the abrasion-resisting layer in situ. The use of preformed materials as the abrasion-resisting layer has been found to be unsatisfactory. Convenient application methods include screen printing, as well as gravure printing as described above in relation to Fig. 6 or spraying. This results in an intimate bond being formed between the abrasion-resisting layer of dots 12 and the flexible substrate 2, whilst at the same time allowing a suitably thin layer of abrasion-resisting material to be applied. The polymeric material may be applied to selected areas of the substrate in liquid form from a hot melt, by solution coating or by emulsion coating. The liquid polymeric material may include a prepolymer which cures in situ, a UV light curable polymer, a room temperature vulcanising polymer, or a thermoplastic polymer. Suitable elastomeric polymers include polyesters, polyvinylchloride, polyamides, silicones, polyurethanes, or polyurethane-polyester composites. Reactive polyurethanes, such as blocked polymers, whose reactive groups unblock above a certain temperature are especially useful. Fillers may be included provided their particle size is less than the smallest dimension of the discontinuous layer. The cured polymer will generally be resistant to conventional dry-cleaning solvents. Where the substrate 2 includes a hydrophilic coating polyurethane layer 14 (Fig. 3), the abrasion resisting polymer when cured will be chemically compatible therewith.

From the foregoing it will be appreciated that a

"hard" abrasion-resistant polyurethane such as OLC-5T is a preferred polymeric material for the formation of dots in accordance with the invention. It should be noted that the type of polyurethane used for the dots has different characteristics from the "soft" type of polyurethane which may be used for the hydrophilic coating 14 in the embodiment of Fig. 3.

It will be understood by those skilled in the art that within the generic family of polyurethane polymers there exists a wide range of polymers having diverse properties of toughness, hardness, elasticity, hydrophilicity etc. Generally, it is known that polyurethane polymers having a sufficient degree of hydrophilicity and water vapour permeability to render them suitable for use in garments have poor toughness and abrasion resistance. However, polyurethane polymers exist which are very tough and have high abrasion resistance but do not have the water vapour permeability that is required for garment applications.

In the present invention the abrasion-resisting dot polymer is selected from the latter range of polyurethane polymers and it has been found that polymers having an elastic modulus of greater than about 800 psi (5.5 Nmm^{-2}) are suitable materials for forming the abrasion-resisting dots in accordance with the present invention.

The abrasion resisting polymer may itself be water-vapour-permeable. This, however, is generally not necessary provided that the percentage coverage of the substrate material is not too great to substantially affect the water-vapour-permeability thereof.

The pattern of abrasion-resisting material in the form of discrete dots is discontinuous in the sense that it includes open areas free of polymeric material and does not form a continuous layer over the surface of the substrate. Generally, the percentage coverage of the surface of the flexible substrate 2 by the polymeric

dots 12 is in the region 20-80%, particularly 30-70%, more especially 40-60% by area. It will be appreciated that the spacing between the dots 12 should not be so great as to permit ready access to open areas whereby abrasion of these open areas may occur.

The discontinuous pattern of discrete dots may be any suitable pattern so long as the coverage is such as to tend to prevent abrasion of the substrate. The pattern needs to be chosen so as to exhibit good handleability.

The dots 12 need not be substantially circular in shape as described in Fig. 1 to 3. The dots may in principle be of any shape, such as squares, rectangles, polygons etc. However, in order to reduce abrasion, squares, diamonds or other shapes having sharp corners are not preferred. Preferably, the cross-section of the dots in a plane normal to the substrate is substantially hemispherical, part-spherical or truncated hemispherical in shape.

The pattern of dots 12 may be a random pattern or an orderly pattern according to a predetermined spatial geometry. Although specific dimensions are given for the dots 12 described in Figs. 1 to 5, it will be understood that the dimensions can be varied in accordance with the purpose for which the composite material is to be used. Each dot is preferably of a maximum cross-dimension or width in the plane of the substrate which is less than 5000 microns, for example in the range 100 to 1000 microns, preferably 200-800, particularly 400-600 microns. The dots 12 may be spaced apart centre-to-centre by 200-2000 microns, particularly 300-1500, especially 400-900 microns. Each dot may have a height in the range 10-200 microns, preferably 70-140, particularly 80-100 microns.

The material of the present invention may be used to produce a variety of products including wearing apparel such as garments including hats, gloves or

shoes.

An important advantage of the water-vapour-permeable water-resistant composite materials of the present invention is their ability to be seam sealed. Such sealing is carried out in order to seal the stitched seams of a water-resistant garment to prevent liquid water entering through the stitching holes. It is accomplished by applying a tape coated with a heated hot melt adhesive under pressure over the inside of the seam and bonding thereto. However, the seam-sealing of conventional material comprising a face fabric, intermediate porous membrane and inner lining is impeded by the presence of the inner lining which lies between the water-resistant membrane and the sealing tape, and which hinders the formation of a seal between the membrane and the tape.

It is found that the materials of the present invention have good seam sealing properties and adhesion of the seam sealing tape to the abrasion-resisting layer is good.

In use of a composite material of the type of the present invention, abrasion forces lead to the creation of leaks in the water-resistant composite material. This destroys the water-resistance of a garment constructed from the composite material. An appropriate test method for determining abrasion-resistance for present purposes is to measure the degree of abrasion until one or more leaks is formed in the material. The abrasion-resistance of the composite material including the abrasion-resisting layer according to the present invention has an abrasion-resistance which is greater (within experimental limits) than a flexible substrate without the abrasion-resisting layer. Depending on the nature of the abrasion-resisting layer, the abrasion resistance of the material according to the present invention may be at least 1.5 times, advantageously at least 4.0 times, the abrasion-

resistance of the flexible substrate alone. In particular circumstances, the abrasion-resistance may be increased by up to 10 times or more. On the other hand, whilst the moisture vapour permeability of the substrate is decreased somewhat by the application of the abrasion-resisting layer (which could itself have a degree of water vapour permeability), such decrease would be also expected from the lamination of an inner lining to a substrate as in previously proposed technology. Thus, the use of an abrasion-resisting layer according to the present invention has the capacity to markedly increase the abrasion resistance of the material whilst at the same time not unduly decreasing the water-vapour-permeability.

It is surprisingly found that the decrease in water vapour permeability is proportionally less than the decrease in free surface area of the substrate on application of the abrasion resisting layer.

Tests on the composite material of the invention to measure abrasion resistance and water-resistance or water-vapour permeability were carried out using the following methods:-

TEST METHODS

TEST FOR MOISTURE VAPOUR TRANSMISSION RATE (MVTR)
(Potassium Acetate Method)

Moisture vapour transmission rate (MVTR), i.e. water-vapour-permeability, was measured by placing approximately 70 ml of a solution consisting of 35 parts by weight of potassium acetate and 15 parts by weight of distilled water into a 133 ml. polypropylene cup, having an inside diameter of 6.5 cm at its mouth. An expanded polytetrafluoroethylene (PTFE) membrane having a minimum MVTR of approximately 85,000g/m^2/24 hrs. as tested by the method described in US Patent No. 4,862,730 to Crosby and available from W. L. Gore & Associates, Inc. of Newark, Delaware, was heat sealed to the lip of the cup to create a taut, leakproof, microporous barrier

containing the solution.

A similar expanded PTFE membrane was mounted to the surface of a water bath. The water bath assembly was controlled at 23°C plus or minus 0.2°C, utilising a temperature controlled room and a water circulating bath. The sample to be tested was allowed to condition at a temperature of 23°C and a relative humidity of 50% prior to performing the test procedure. Three samples were placed so that each sample to be tested was in contact with the expanded PTFE membrane mounted over the surface of the water bath, and was allowed to equilibrate for at least 15 minutes prior to the introduction of the cup assembly.

The cup assembly was weighed to the nearest 1/1000g and was inverted onto the centre of the text sample.

Water transport was provided by the driving force between the water in the water bath and the saturated salt solution providing water flux by diffusion in that direction. The sample was tested for 20 minutes and the cup assembly was then removed, and weighed again to within 0.001g.

The MVTR of the sample was calculated from the weight gain of the cup assembly and was expressed in grams of water per square meter of sample surface area per 24 hours.

ABRASION TEST

Abrasion testing was carried out using a Martindale Abrasion machine and by rubbing samples with a standard wool toll SM25 which complied with draft ISO ST CD 12974-1 Table 1, clause 5.6.2 which is based on British Standard BS 5690, 1991.

Briefly, the test procedure is as follows:

Circular specimens of sample material are abraded on a reference abradant of a cross-breed worsted spun plain-woven wool fabric under pressure of 12kPa with a cyclic planar motion in the form of a Lissajous figure, which is the resultant of two simple harmonic motions at

right angles to each other. The resistance to abrasion corresponds to the number of cycles to the defined end point. The abrasion machine is of the type described by Martindale (J.Text.Inst. 1942:33,T151).

Each sample is removed from the machine after a predetermined number of rubs and tested for liquid water-resistance as described herein (under a hydrostatic pressure of 2 psi (0.14 kg/cm^2) for 3 minutes) until a leak was detected which indicated breakdown of water-resistance. Samples were tested every 100 rubs up to a 1000 rubs. They were then tested at the following intervals:

Every 2,000 rubs up to 20,000 rubs
Then every 5,000 " " 50,000 "
Then " 10,000 " " 100,000 "
and then " 20,000 ".

TEST FOR WATER-RESISTANCE (SUTER TEST)

Samples of the present invention were tested for water-resistance using a modified Suter test apparatus, which is a low water entry pressure challenge. The test procedure is set out in BS3424, method 29C. Water was forced against the underside of a sample of 11.25 cm diameter sealed by two circular rubber gaskets in a clamped arrangement. A sample having a substrate of expended PTFE with a hydrophilic coating on one side was mounted with the hydrophilic coating downwards against the water, the expanded porous PTFE membrane being uppermost. It is important that a leakproof seal is formed by the clamp mechanism, gaskets and sample. In deformable samples, the sample was overlaid by a reinforcing scrim (e.g. an open non-woven fabric) clamped over the sample. The upper side of the sample was open to the atmosphere and visible to the operator. The water pressure on the underside of the sample was increased to 2 pounds per square inch (0.14 kg/cm^2) by a pump connected to a water reservoir, as indicated by a pressure gauge and regulated by an in-line valve. The

upper side of the sample was visually observed for a period of three minutes for the appearance of any water which might be forced through the sample in the event of lack of water-resistance. Liquid water seen on the surface was interpreted as a deficiency in the water-resistance of the sample (i.e. a leak). The sample passed the test if no liquid water was visible on the upper side of the sample within the three minute test period.

WASH TO LEAKAGE TEST

The purpose of this test is to determine the time at which leakage occurs in laminated samples by continuous wet flex and abrasion over an extended period of time.

Full width samples of approx. 36 cms in length are cut and the samples are trimmed on all 4 sides using pinking scissors. Where samples are likely to fray and cause tangling, all edges are sewn. Enough samples are cut to give a total wash load of 900±90gms. Make weight fabric samples can be added to make the total weight if not enough samples are available. Samples are then conditioned at 20±2°C and 65±5% relative humidity for 4 hours.

The conditioned samples are tested on a Calibrated Hydrostatic Head Tester at 5 positions across the width of the fabric to 1 p.s.i. for 3 mins. to check for any leakage before washing. The positions are marked with an ink marker, so that the same positions can be tested every time. The machine will have a ramp rate of 60 cms water pressure min. and samples will be tested at the 5 positions at 1 p.s.i. for 3 mins.

Enough samples or samples plus make-weights are prepared to make a total load of 900±90 gms. for each machine. Samples are then washed according to the Kenmore wash method (QL 062). After approx. 72 hrs. wash the samples are hung to dry, conditioned, then hydrostatically tested at the same 5 positions to 1

p.s.i. for 3 mins. The test site is deemed to have failed when the first small growing leak is observed. The wash/dry/test cycle is repeated until all 5 positions show signs of leaking.

Kenmore Wash Method (QL062) (referred to above)

This describes how the Kenmore wash machine heavy duty 70 series was used to do continuous wet flex and abrasion testing.

The machine has clear vented perspex cover to prevent the water temperature from exceeding 45°C with continuous washing. The temperature can be checked using a thermometer.

The machine had the water level control set at medium. The water temperature control was set to cold, and the machine cycle selector set at 14 which will give an agitation speed of 150-180 r.p.m. The auto/hand switch should be left on auto. The lid was closed with the isolator screwed fully in. The machine cycle selector knob was pulled out to make the machine fill with water until it reached a level at which the cut-off switch engages. The isolator was unscrewed and 60±4 litres of water poured into the machine and the depth of water measured. After adding the required samples to a total wash load of 900±90g the lid was closed and the isolator screwed in. The wash cycle selector knob was operated to set the machine to wash mode. When ready to spin out the water, the control knob was operated and turned to spin. The water was drained from the machine. The isolator switch was unscrewed and the lid opened to inspect the samples.

The samples were checked approximately every 10 hours for tangling and untangled if required. Cold water added to keep the volume correct every 24 hrs. approx. and the load of fabrics should be a constant weight. The water temperature was not allowed to exceed 45°C.

TABLE 1

Sample	Dot Polymer	Martindale Abrasion Test (cycles to 1st leakage) (Mean)	Moisture Vapour Transmission Rate	Wash Hours to Leakage (Mean)
2 Layer Taslan	NONE	3,800	12,463	594
2 Layer Taslan with dots	OLC-5T	55,200	8,861	799
2 Layer Islay	NONE	6,000	13,401	535
2 Layer Islay with dots	OLC-5T	131,000	8,241	659
2 Layer Milano	NONE	<1000	11,602	418
2 Layer Milano with Dots	OLC-5T	145,800	5,849	543

The foregoing Table 1 refers to six different laminates namely 2 layer Taslan, 2 layer Taslan with dots; 2 layer Islay, 2 layer Islay with dots; 2 layer Milano, 2 layer Milano with dots.

2 layer Taslan is a material comprising a face fabric of woven texturised nylon 66 laminated to an expanded PTFE membrane coated on its opposing surface with a continuous hydrophilic layer of water-vapour-permeable polyurethane as described in US Patent No. 4,194,041.

2 layer Islay is a material comprising a face fabric of woven texturised polyester twill fabric laminated to a porous expanded PTFE membrane coated on its opposing surface with a continuous hydrophilic layer of a water-vapour-permeable polyurethane as described in US Patent No. 4,194,041.

2 layer Milano is a material comprising a face fabric of plain woven high tenacity texturised nylon 66 laminated to a porous expanded PTFE membrane coated on its opposing surface with a continuous hydrophilic layer of a water-vapour-permeable polyurethane as described in US Patent No. 4,194,041.

The above Taslan, Islay and Milano materials are available from W. L. Gore & Associates (UK) Ltd.

Each of the six samples were tested using the tests previously described for water-vapour-permeability (MVTR), abrasion resistance, and wash to leakage by comparing a 2 layer plain substrate, i.e. a substrate and face fabric without abrasion-resisting dots against 2 layer substrates with a pattern of abrasion-resisting dots in accordance with the invention. Each sample was tested in triplicate.

Table 1 shows that substantial increases in abrasion resistance to first leakage are obtained in each of the samples having the abrasion-resisting dots of the invention.

Table 1 also indicates the polymer used in each case for the abrasion-resisting polymeric dots which was a polyurethane polymer referred to as OLC-5T and which was prepared according to the teachings of Example 1 of US Patent No. 5,209,969.

As described above in relation to Fig. 6 of the accompanying drawings, the method of the present invention using the polyurethane polymer OLC-5T requires curing of the polymer at an elevated temperature of around 200°C, say 160-200°C.

The polyurethane polymer OLC-5T is one of a number of polymers which have been found satisfactory for the formation of dots in accordance with the present invention. It will be appreciated, however, that other polymeric materials can also be used provided their abrasion resistance is satisfactory for their purpose and they are compatible with the substrate materials with which they are to be used.

The polymer was printed according to a 7-dot rosette pattern of the type shown in Figure 1.

As also can be seen from Table 1, the water-vapour-permeability (MVTR) of the composite material of the present invention is less that of conventional 2-layer constructions but is at a level which is acceptable.

The wash to leakage test is another durability test which measures the time to leakage in a sample subjected to a continuous flex and abrasion under wet washing conditions. The wash durability of the materials of the present invention as set out in Table 1 is significantly better than that of the conventional corresponding 2-layer material.

Variation of the polymer print pattern (using OLC-5T polymer) resulted in minor variations in water-vapour-permeability of the inventive materials.

The composite material of the present invention has generally been found to possess the durability normally associated with 3-layer materials including a

conventional inner lining but is closer to the comfort, handle and production costs of a conventional 2-layer material.

CLAIMS

1. A composite lining material for a garment or the like comprising

(a) a water-resistant, water-vapour-permeable, flexible substrate having a first and second side;

(b) a fabric secured to said first side of the substrate; and

(c) a plurality of discrete abrasion-resisting polymeric dots forming a discontinuous lining-forming pattern over the surface of said second side of the substrate and which dots resist abrasion of the flexible substrate.

2. A composite material as claimed in claim 1, in which the dots have a substantially smooth, non-angular profile.

3. A composite material as claimed in claim 2, in which each of the dots has a cross-section in the plane of the substrate which is substantially circular and a cross-section which is substantially part-spherical in a plane normal to the substrate.

4. A composite material as claimed in any of claims 1 to 3, in which the maximum dimension of the cross-section in the plane of the substrate is less than 5000 microns.

5. A composite material as claimed in claim 4, in which said maximum dimension is from 100 to 1000 microns.

6. A composite material as claimed in claim 5, in which said maximum dimension is from 200-800 microns.

7. A composite material as claimed in claim 6, in which said maximum dimension is from 400-600 microns.

8. A composite material as claimed in any preceding claim, in which each dot has a height in the range of 10 to 200 microns.

9. A composite material as claimed in claim 8, in which each dot has a height in the range of 70 to 140

microns.

10. A composite material as claimed in claim 9, in which each dot has a height in the range of 80 to 100 microns.

11. A composite material as claimed in any preceding claim in which the centre of each dot is spaced from the centre of an adjacent dot by 200 to 2000 microns.

12. A composite material as claimed in claim 11, in which the centre of each dot is spaced from the centre of an adjacent dot by 300 to 1500 microns.

13. A composite material as claimed in claim 12, in which the centre of each dot is spaced from the centre of an adjacent dot by 400 to 900 microns.

14. A composite material as claimed in any preceding claim, in which the ratio of the distance between centres of adjacent dots, the maximum dimension of each dot and the height of each dot is within the range of about 7.5:5:1 to about 15:10:1.

15. A composite material as claimed in any preceding claim, in which the percentage coverage of the surface of the substrate by the dots is 20 to 80%.

16. A composite material as claimed in claim 15, in which the percentage coverage of the surface of the substrate by the dots is 30 to 70%.

17. A composite material as claimed in claim 16, in which the percentage coverage of the surface of the substrate by the dots is 40 to 60%.

18. A composite material as claimed in any preceding claim, in which the substrate is a porous membrane.

19. A composite material as claimed in claim 18 in which the porous membrane is expanded polytetrafluoroethylene.

20. A composite material as claimed in claim 18 or 19, in which the substrate comprises the porous membrane and a coating of a water-vapour-permeable hydrophilic polymer and to which coating the dots are secured.

21. A composite material as claimed in claim 20, in

which the hydrophilic polymer is a polyurethane or polyester.

22. A composite material as claimed in any preceding claim, in which said dots are formed from an abrasion-resisting polyurethane having an elastic modulus greater than about 800 psi (5.5 Nmm^{-2}).

23. A composite material as claimed in claim 21 in which the dot-forming polyurethane is water-vapour-permeable.

24. A composite material as claimed in any preceding claim, in which the material was a water resistance of greater than 0.1 kg/cm.

25. A composite material as claimed in any preceding claim, in which the material has a water-vapour-permeability in excess of 1500 $g/m^2/day$.

26. A composite material as claimed in any preceding claim, in which the dots are applied in the form of a plurality of rosettes.

27. A composite material as claimed in any preceding claim, in which the abrasion resistance of the composite material is at least 1.5 times the abrasion resistance of the flexible substrate alone.

28. A garment comprising a composite material as claimed in any preceding claim.

29. A garment as claimed in claim 28, in which the abrasion-resisting polymeric dots form the innermost component of the garment to form a lining.

30. A process of producing a composite lining material for a garment or the like comprising securing a fabric to a first side of a flexible, water-resistant, water-vapour-permeable substrate; and applying a plurality of abrasion-resisting polymeric dots to a second side of said substrate in order to form a discontinuous lining-forming pattern over the surface of said second side to resist abrasion of the flexible substrate.

31. A process as claimed in claim 30, comprising applying the polymeric dots by means of gravure

printing.

32. A process as claimed in claim 30 or 31, in which the dots have a substantially smooth, non-angular profile.

33. A process as claimed in claim 32, in which each of the dots has a cross-section in the plane of the substrate which is substantially circular and a cross-section which is substantially part-spherical in a plane normal to the substrate.

34. A process as claimed in any of claims 30 to 33, in which the maximum dimension of the cross-section in the plane of the substrate is less than 5000 microns.

35. A process as claimed in claim 34, in which the maximum dimension of the cross-section is from 100 to 1000 microns.

36. A process as claimed in claim 35, in which the maximum dimension of the cross-section is from 200-800 microns.

37. A process as claimed in claim 36, in which the maximum dimension of the cross-section is from 400-600 microns.

38. A process as claimed in any of claims 30 to 37, in which each dot has a height in the range of 10 to 200 microns.

39. A process as claimed in claim 38, in which each dot has a height in the range of 70 to 140 microns.

40. A process as claimed in claim 39, in which each dot has a height in the range of 80 to 100 microns.

41. A process as claimed in any of claims 30 to 40, in which the centre of each dot is spaced from the centre of an adjacent dot by 200 to 2000 microns.

42. A process as claimed in claim 41, in which the centre of each dot is spaced from the centre of an adjacent dot by 300 to 1500 microns.

43. A process as claimed in claim 42, in which the centre of each dot is spaced from the centre of an adjacent dot by 400 to 900 microns.

44. A process as claimed in any of claims 30 to 43, in which the ratio of the distance between centres of adjacent dots, the maximum dimension of each dot and the height of each dot is within the range of about 7.5:5:1 to about 15:10:1.

45. A process as claimed in any pf claims 30 to 44, in which the percentage coverage of the surface of the substrate by the dots is 20 to 80%.

46. A process as claimed in claim 45, in which the percentage coverage of the surface of the substrate by the dots is 30 to 70%.

47. A process as claimed in claim 46, in which the percentage coverage of the surface of the substrate by the dots is 40 to 60%.

48. A process as claimed in any of claims 30 to 47, in which the substrate is a porous membrane.

49. A process as claimed in claim 48 in which the porous membrane is expanded polytetrafluoroethylene.

50. A process as claimed in claims 48 or 49, in which the substrate comprises the porous membrane and a coating of a water-vapour-permeable hydrophilic polymer and to which coating the dots are secured.

51. A process as claimed in claim 50, in which the hydrophilic polymer is a polyurethane or polyester.

52. A process as claimed in any of claims 30 to 51, in which said dots are formed from an abrasion-resisting polyurethane having an elastic modulus of greater than 800 psi (5.5 N/mm^{-2}).

53. A process as claimed in claim 51 in which the dot-forming polyurethane is water-vapour-permeable.

54. A process as claimed in any of claims 30 to 53, in which the material was a water resistance of greater than 0.1 kg/cm.

55. A process as claimed in any of claims 30 to 54, in which the material has a water-vapour-permeability in excess of 1500 $g/m^2/day$.

56. A process as claimed in any of claims 30 to 55, in

which the dots are applied in the form of a plurality of rosettes.

57. A process as claimed in any of claims 30 to 56, in which the abrasion resistance of the composite material is at least 1.5 times the abrasion resistance of the flexible substrate alone.

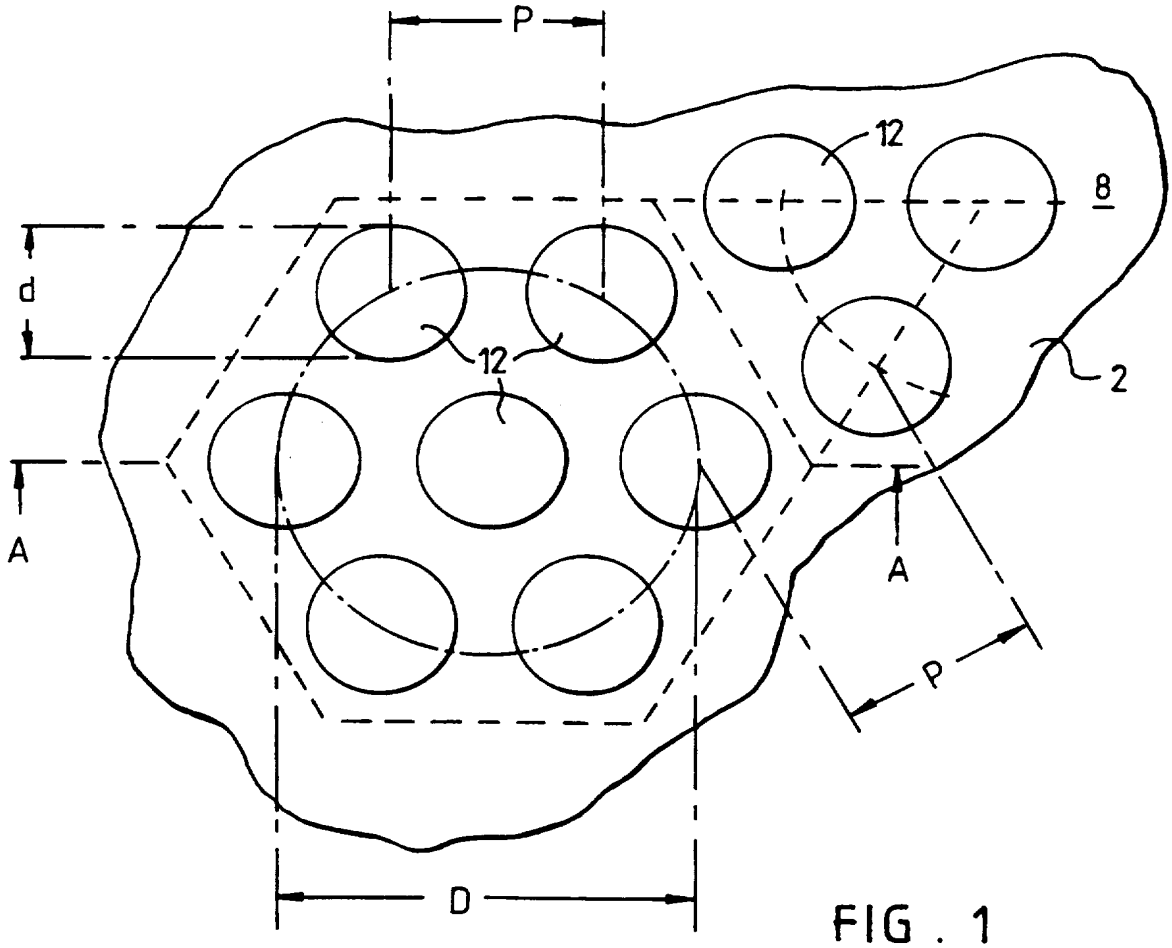

FIG. 1

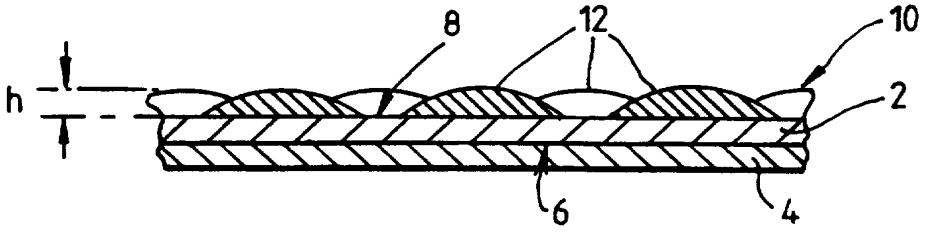

FIG. 2

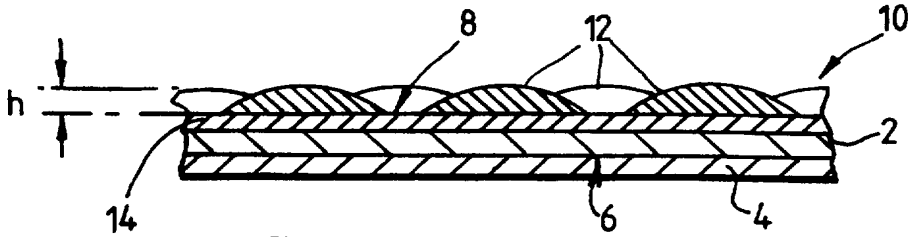

FIG. 3

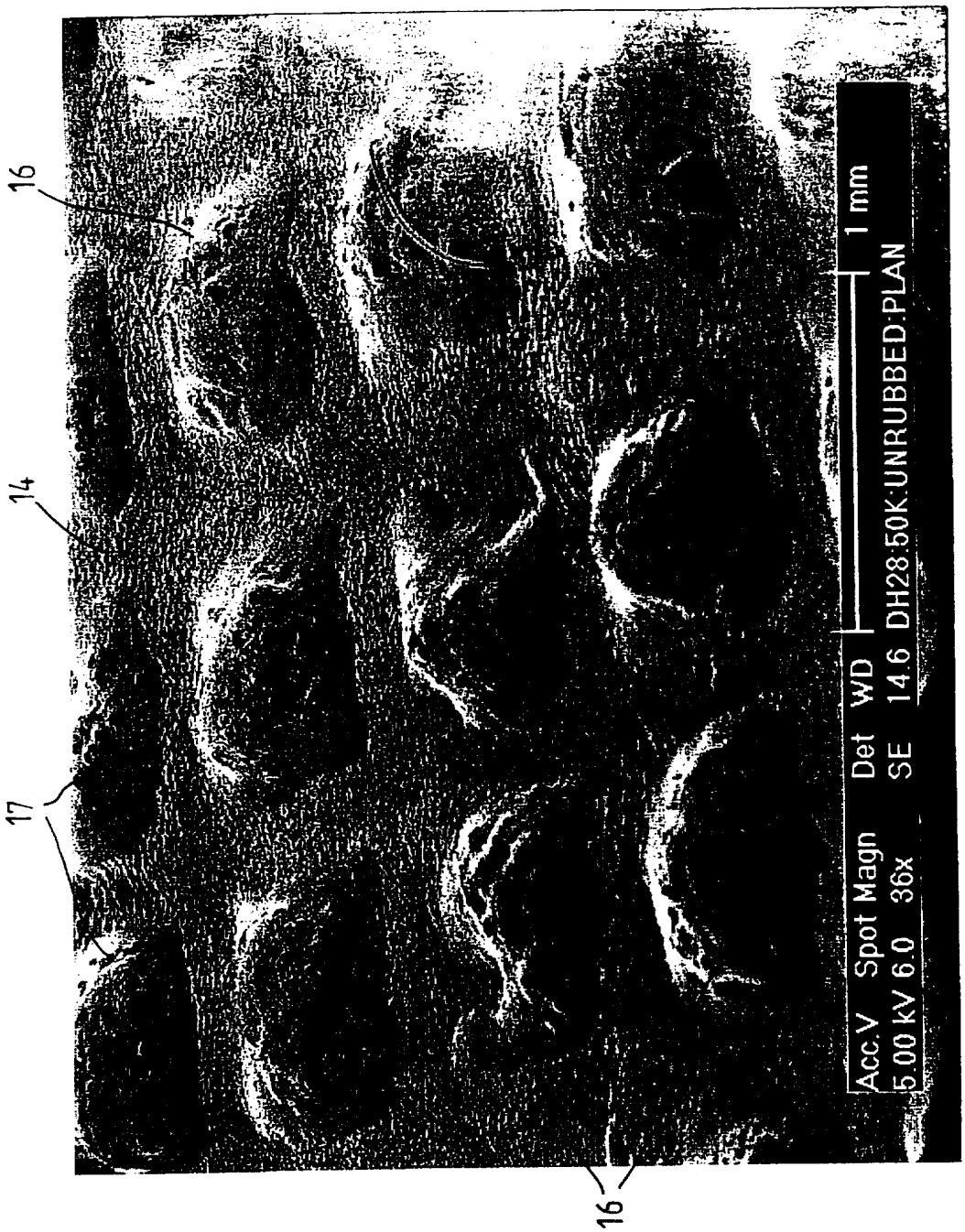

FIG. 4

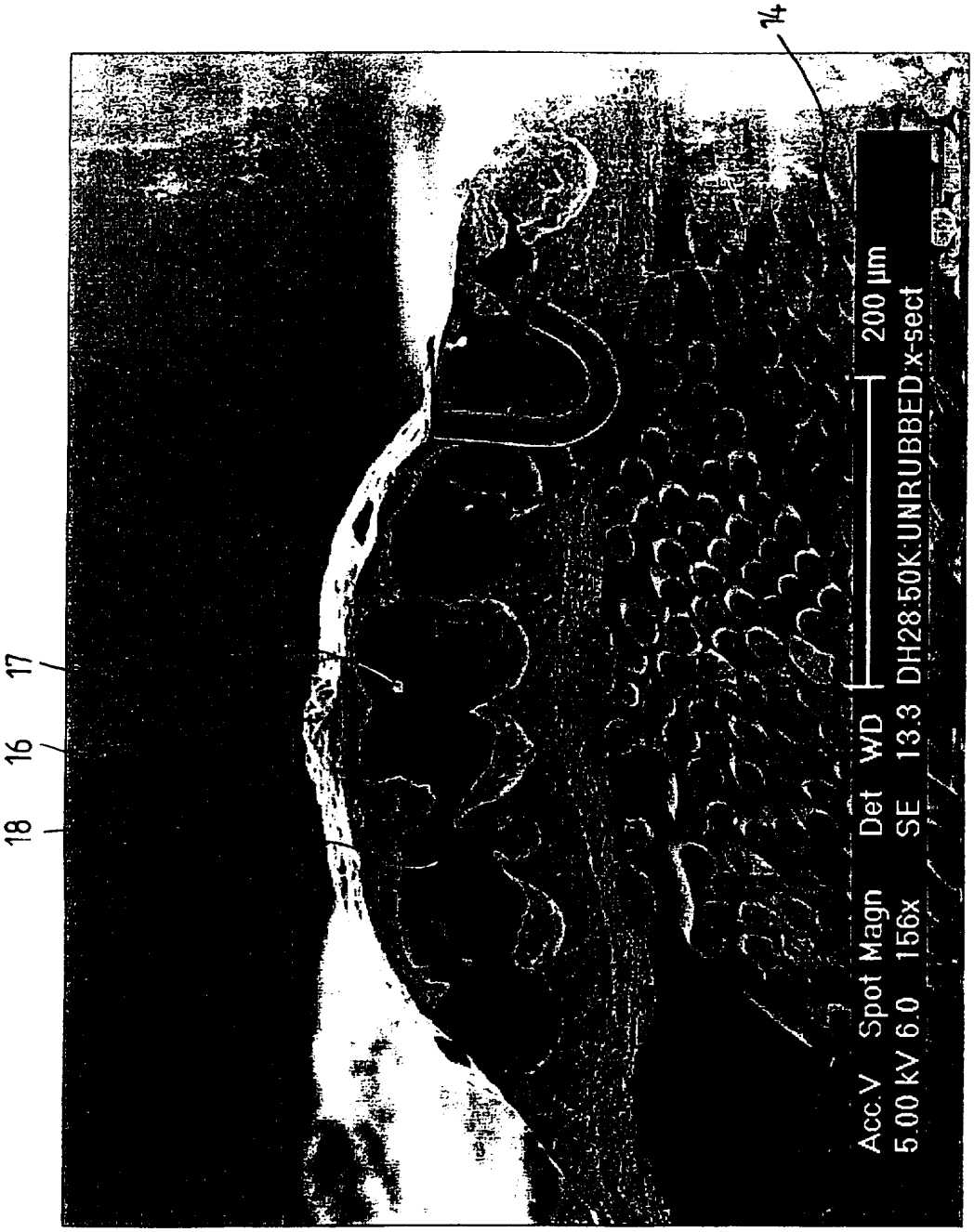

FIG. 5

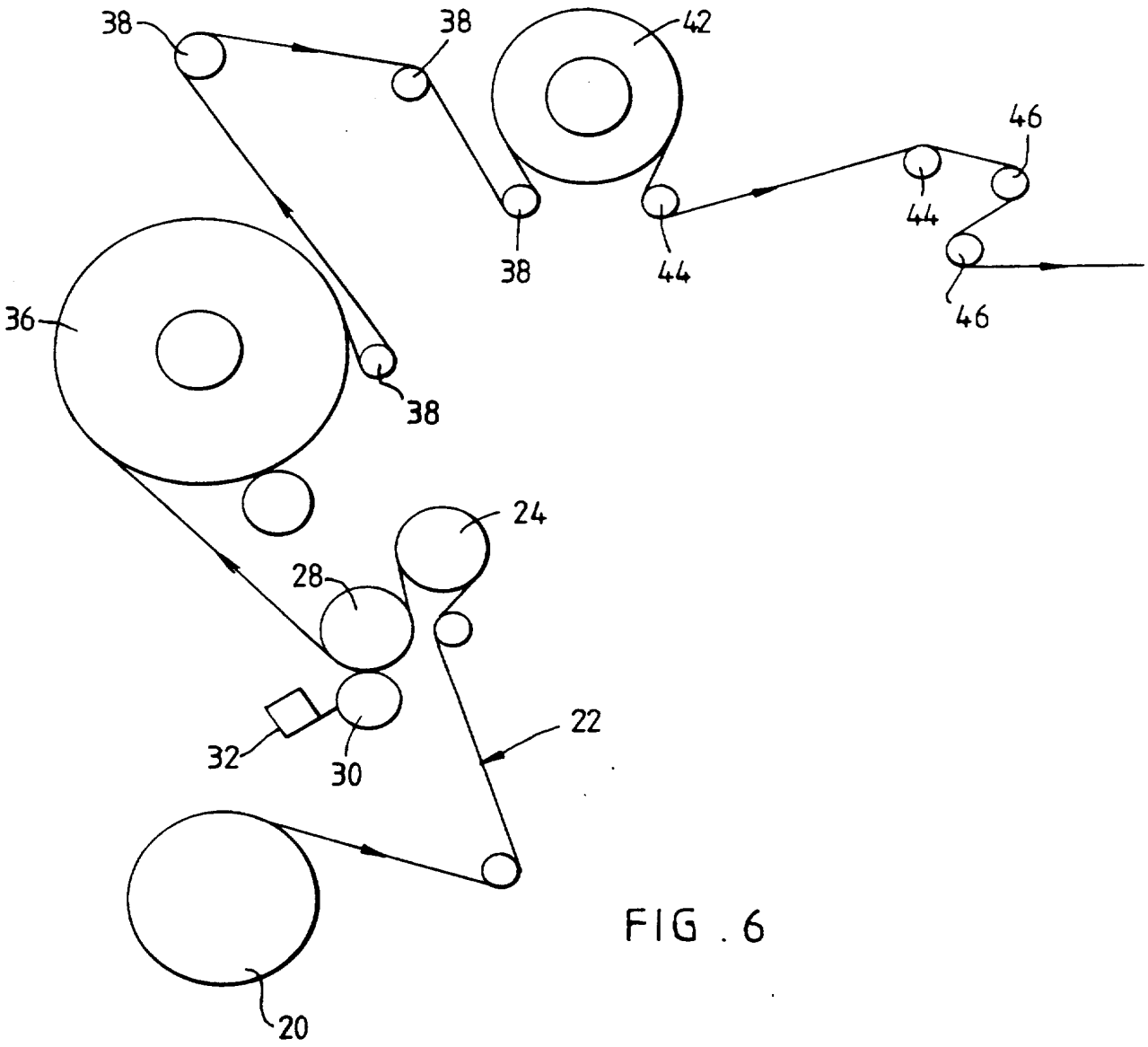

FIG. 6

INTERNATIONAL SEARCH REPORT

Inte onal Application No
PCT/GB 97/02172

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 D06N3/04 D06N3/18 B32B27/12 A41D31/02

According to International Patent Classification(IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 D06N B32B A41D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 636 423 A (J. S. REID) 13 January 1987 see column 1, line 50 - column 4, line 40	1,30,31, 52
A	EP 0 422 918 A (E.I DU PONT DE NEMOURS AND COMPANY) 17 April 1991 see page 2, line 30 - page 4, line 29	1,15,18, 19,24,28
A	WO 90 15713 A (W. L. GORE & ASSOCIATES, INC.) 27 December 1990 see page 3, line 1 - page 7, line 11	1,18,19, 30,31

☐ Further documents are listed in the continuation of box C. ☒ Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
24 November 1997	04/12/1997

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Doolan, G

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inte ɔnal Application No
PCT/GB 97/02172

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4636423 A	13-01-87	NONE	
EP 422918 A	17-04-91	US 5050241 A	24-09-91
		AT 124326 T	15-07-95
		AU 620266 B	13-02-92
		AU 6452090 A	18-04-91
		CA 2027290 A	12-04-91
		DE 69020487 D	03-08-95
		DE 69020487 T	07-03-96
		JP 3206105 A	09-09-91
WO 9015713 A	27-12-90	CA 2050342 A,C	17-12-90
		DE 69008723 D	09-06-94
		DE 69008723 T	15-12-94
		EP 0476061 A	25-03-92
		JP 5500641 T	12-02-93
		US 5104727 A	14-04-92

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Collins et al.	)	Group Art Unit: 1783
	)	
Appln. Serial No.: 12/704,981	)	Examiner: Khatri, Prashant J.
	)	
Filed: 02/12/2010	)	
	)	
For: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips	)	

Response to Restriction Election

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

Dear Sir:

This is in response to the Office Action mailed September 30, 2010, restricting Examination and setting a one month time for response. Applicant responds to the restriction and makes an election.

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. § 1.8(a)(1)(i)(C)

Date of Transmission: 19 OCTOBER 2010

I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office (USPTO) via the USPTO electronic filing system (EFS-Web) on the date shown above.

By: _____
James Petruzzi

ELECTION

Applicant elects Method claims, 1-9 Species I. Claims 1-9 are hereby identified as encompassing the elected species.

REMARKS

The Examiner has cited that the application contains claims directed to the patentably distinct species. The Examiner states that there would be an examination and search burden for these patentably distinct species due to their being in separate classes. Applicant respectfully traverses. Independent claims 1, 10 and 12 have the common element of nail tabs being deposited and adhered to the substrate using a pressure roll and/or lamination. The Examiner will be required to search the same classes for systems that utilize this method of application. Thus, there is no additional burden in the examination of the elected and withdrawn claims and they should be examined together. As set forth in §863 of the MPEP, if the search and examination of an entire application can be made without serious burden, the Examiner must examiner it on the merits, even though it may includes claims subject to distinct or independent inventions. For these reasons, applicant respectfully request examination on all claims as originally presented.

The forgoing documents are being filed via the U.S. Patent and Trademark Office's EFS-Web electronic filing system.

Please link this application to Customer No. 29281 so that its status may be checked via the PAIR System.

Dated: October 19, 2010

Respectfully submitted,

/James D Petruzzi 35,644/
James D. Petruzzi, Reg. No. 35,644
Mason & Petruzzi
4900 Woodway
Suite 745
Houston, TX 77056
Customer Number 29281

Electronic Acknowledgement Receipt

EFS ID:	8651005
Application Number:	12704981
International Application Number:	
Confirmation Number:	7359
Title of Invention:	Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips
First Named Inventor/Applicant Name:	David Allan Collins
Customer Number:	29281
Filer:	James Daniel Petruzzi
Filer Authorized By:	
Attorney Docket Number:	FFC-500-003
Receipt Date:	19-OCT-2010
Filing Date:	12-FEB-2010
Time Stamp:	10:37:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Response to Election / Restriction Filed	RespRestrimg.pdf	438634 e719c3b3acfaa0885f502cbc701eb3f070dfcdd7	no	2

Warnings:	
Information:	

Total Files Size (in bytes):	438634

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/704,981	02/12/2010	David Allan Collins	FFC-500-003	7359

29281 7590 09/30/2010

JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056

EXAMINER	
KHATRI, PRASHANT J	

ART UNIT	PAPER NUMBER
1783	

MAIL DATE	DELIVERY MODE
09/30/2010	PAPER

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.

Office Action Summary	Application No.	Applicant(s)	
	12/704,981	COLLINS ET AL.	
	Examiner	Art Unit	
	PRASHANT J. KHATRI	1783	

-- 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 *1* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1)☒ Responsive to communication(s) filed on *12 February 2010*.

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

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

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

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

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

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

8)☒ Claim(s) *1-16* are subject to restriction and/or election requirement.

Application Papers

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

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

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

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

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

Priority under 35 U.S.C. § 119

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

a)☐ All b)☐ Some * c)☐ None of:

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

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

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

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

Attachment(s)

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

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-9, drawn to a method of making a roofing or building cover, classified in class 427, subclass 256.

II. Claims 10-16, drawn to a roofing material, classified in class 428, subclass 343.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the tab material can be deposited by an ink-jet printing process.

3. Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and/or examination burden if restriction were not required because at least the following reason(s) apply:

The inventions have acquired a separate status in the art in view of their different classification.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected invention**.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder**. Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRASHANT J. KHATRI whose telephone number is (571)270-3470. The examiner can normally be reached on M-F 8:00 A.M.-5:00 P.M. (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. 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.

/Patricia L. Nordmeyer/
Primary Examiner, Art Unit 1783

PRASHANT J KHATRI
Examiner
Art Unit 1783

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12704981	COLLINS ET AL.
	Examiner	**Art Unit**
	PRASHANT J KHATRI	1783

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

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/28/2010								
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	16	÷								

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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/704,981	02/12/2010	David Allan Collins	FFC-500-003

CONFIRMATION NO. 7359

29281
JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056

PUBLICATION NOTICE

OC000000042029974

Title: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips

Publication No.US-2010-0143667-A1
Publication Date:06/10/2010

NOTICE OF PUBLICATION OF APPLICATION

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

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12704981
Filing Date	2010-02-12
First Named Inventor	Collins, David
Art Unit	3633
Examiner Name	unknown
Attorney Docket Number	FFC-500-003

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4554196		1985-11-19	Meeker	passim
	2	5365709		1994-11-22	Lassiter	passim
	3	6451409		2002-09-17	Lassiter	passim
	4	6033723		2000-03-07	Kistler et al.	passim
	5	6531027		2003-03-11	Lender et al.	passim
	6	6210757		2001-04-14	Taylor et al.	passim
	7	3003906		1961-10-10	Arthur Fasold George et al.	passim
	8	4618528		1986-10-21	Sacks et al.	passim

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12704981
	Filing Date	2010-02-12
	First Named Inventor	Collins, David
	Art Unit	3633
	Examiner Name	unknown
	Attorney Docket Number	FFC-500-003

	9	4624721		1986-11-25	Sadler et al.	pasim
	10	5599586		1997-02-04	Israel	passim

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030215594		2003-11-20	Hamdar et al.	passim
	2	20030203145		2003-10-30	Zanchetta et al.	passim

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FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] ¡	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	023609	EP		1986-12-03	Jensen et al.	passim	☐
	2	WO9729256	WO		1997-08-14	Van Cleemput	passim	☐

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NON-PATENT LITERATURE DOCUMENTS Remove

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12704981
	Filing Date	2010-02-12
	First Named Inventor	Collins, David
	Art Unit	3633
	Examiner Name	unknown
	Attorney Docket Number	FFC-500-003

	1		☐

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

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

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

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12704981
Filing Date	2010-02-12
First Named Inventor	Collins, David
Art Unit	3633
Examiner Name	unknown
Attorney Docket Number	FFC-500-003

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.

☐ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ None

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	/James D. Petruzzi 35,644/	Date (YYYY-MM-DD)	2010-03-22
Name/Print	James D. Petruzzi	Registration Number	35,644

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

Privacy Act Statement

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

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

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	7251711
Application Number:	12704981
International Application Number:	
Confirmation Number:	7359
Title of Invention:	Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips
First Named Inventor/Applicant Name:	David Allan Collins
Customer Number:	29281
Filer:	James Daniel Petruzzi
Filer Authorized By:	
Attorney Docket Number:	FFC-500-003
Receipt Date:	22-MAR-2010
Filing Date:	12-FEB-2010
Time Stamp:	09:34:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Filed (SB/08)	updated_IDS.pdf	612436 b83892dca3aef840f7016a45a1e705749540 7258	no	5

Warnings:	
Information:	

Total Files Size (in bytes):	612436

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.

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United States Patent and Trademark Office
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www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
12/704,981	02/12/2010	3633	572	FFC-500-003	16	4

CONFIRMATION NO. 7359

29281
JAMES D. PETRUZZI
4900 WOODWAY SUITE 745
HOUSTON, TX 77056

FILING RECEIPT

Date Mailed: 03/02/2010

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

David Allan Collins, Houston, TX;
George William Jackson, Houston, TX;
Miguel E. Madero O'Brien, Mexico City, MEXICO;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 11/475,455 06/27/2006 PAT 7,666,498
which is a DIV of 10/855,264 05/27/2004 PAT 7,201,946
which claims benefit of 60/474,194 05/29/2003
and claims benefit of 60/485,774 07/09/2003

Foreign Applications

If Required, Foreign Filing License Granted: 02/25/2010

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/704,981**

Projected Publication Date: 06/10/2010

Non-Publication Request: No

Early Publication Request: No
** **SMALL ENTITY** **

Title

Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips

Preliminary Class

052

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

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For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

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PTO/SB/05 (08-08)
Approved for use through 06/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	
First Inventor	Collins, David A.
Title	Print Methodology ...Nail Tabs
Express Mail Label No.	

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☐ **Fee Transmittal Form** (e.g., PTO/SB/17)
2. ☑ **Applicant claims small entity status.** See 37 CFR 1.27.
3. ☑ **Specification** [*Total Pages* 26]
   Both the claims and abstract must start on a new page
   (For information on the preferred arrangement, see MPEP 608.01(a))
4. ☑ **Drawing(s)** (35 U.S.C. 113) [*Total Sheets* 10]
5. **Oath or Declaration** [*Total Sheets* 9]
   a. ☐ Newly executed (original or copy)
   b. ☑ A copy from a prior application (37 CFR 1.63(d))
   (for continuation/divisional with Box 16 completed)
   i. ☐ DELETION OF INVENTOR(S)
   Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ **Application Data Sheet.** See 37 CFR 1.76
7. ☐ **CD-ROM or CD-R** in duplicate, large table or Computer Program *(Appendix)*
   ☐ Landscape Table on CD
8. **Nucleotide and/or Amino Acid Sequence Submission**
   (if applicable, items a. – c. are required)
   a. ☐ Computer Readable Form (CRF)
   b. Specification Sequence Listing on:
      i. ☐ CD-ROM or CD-R (2 copies); or
      ii. ☐ Paper
   c. ☐ Statements verifying identity of above copies

ADDRESS TO:

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

ACCOMPANYING APPLICATION PARTS

9. ☐ **Assignment Papers** (cover sheet & document(s))
   Name of Assignee _____
10. ☐ **37 CFR 3.73(b) Statement** *(when there is an assignee)* ☐ **Power of Attorney**
11. ☐ **English Translation Document** *(if applicable)*
12. ☐ **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    ☐ Copies of citations attached
13. ☐ **Preliminary Amendment**
14. ☐ **Return Receipt Postcard** (MPEP 503)
    (Should be specifically itemized)
15. ☐ **Certified Copy of Priority Document(s)**
    (if foreign priority is claimed)
16. ☐ **Nonpublication Request** under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
17. ☐ Other: _____

18. If a CONTINUING APPLICATION, *check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:*

☑ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: 11/475,455

Prior application information: *Examiner* Khatri, Prashant *Art Unit:* 1784

19. CORRESPONDENCE ADDRESS

☑ The address associated with Customer Number: 29281 *OR* ☐ Correspondence address below

Name	James D. Petruzzi				
Address	4900 Woodway, Suite 745				
City	Houston	State	TX	Zip Code	77056
Country	USA	Telephone	713 840-9993	Email	jpetruzzi@mascnpetruzzi.com

Signature	/James D. Petruzzi 35,644/	Date	12 February 2010
Name (Print/Type)	James D. Petruzzi	Registration No. (Attorney/Agent)	35,644

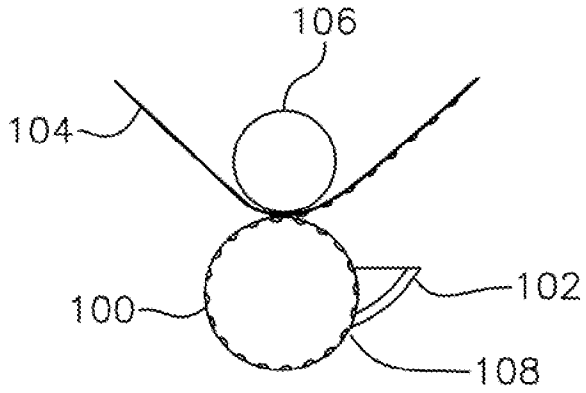

Fig. 1

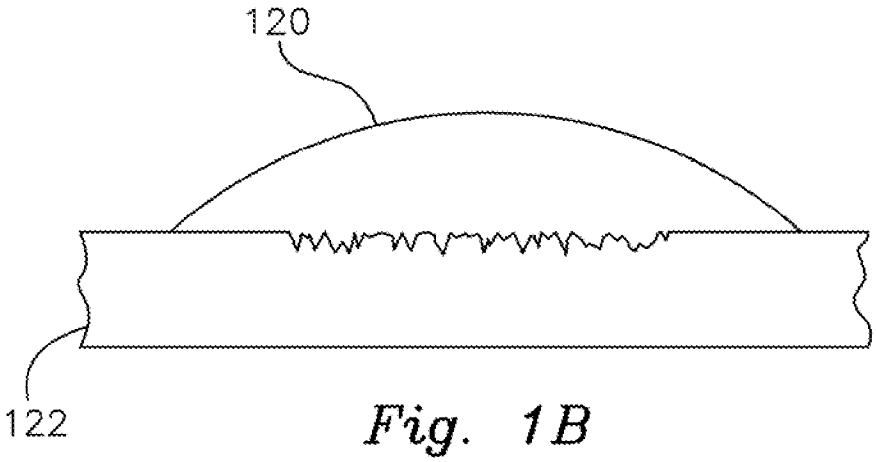

Fig. 1B

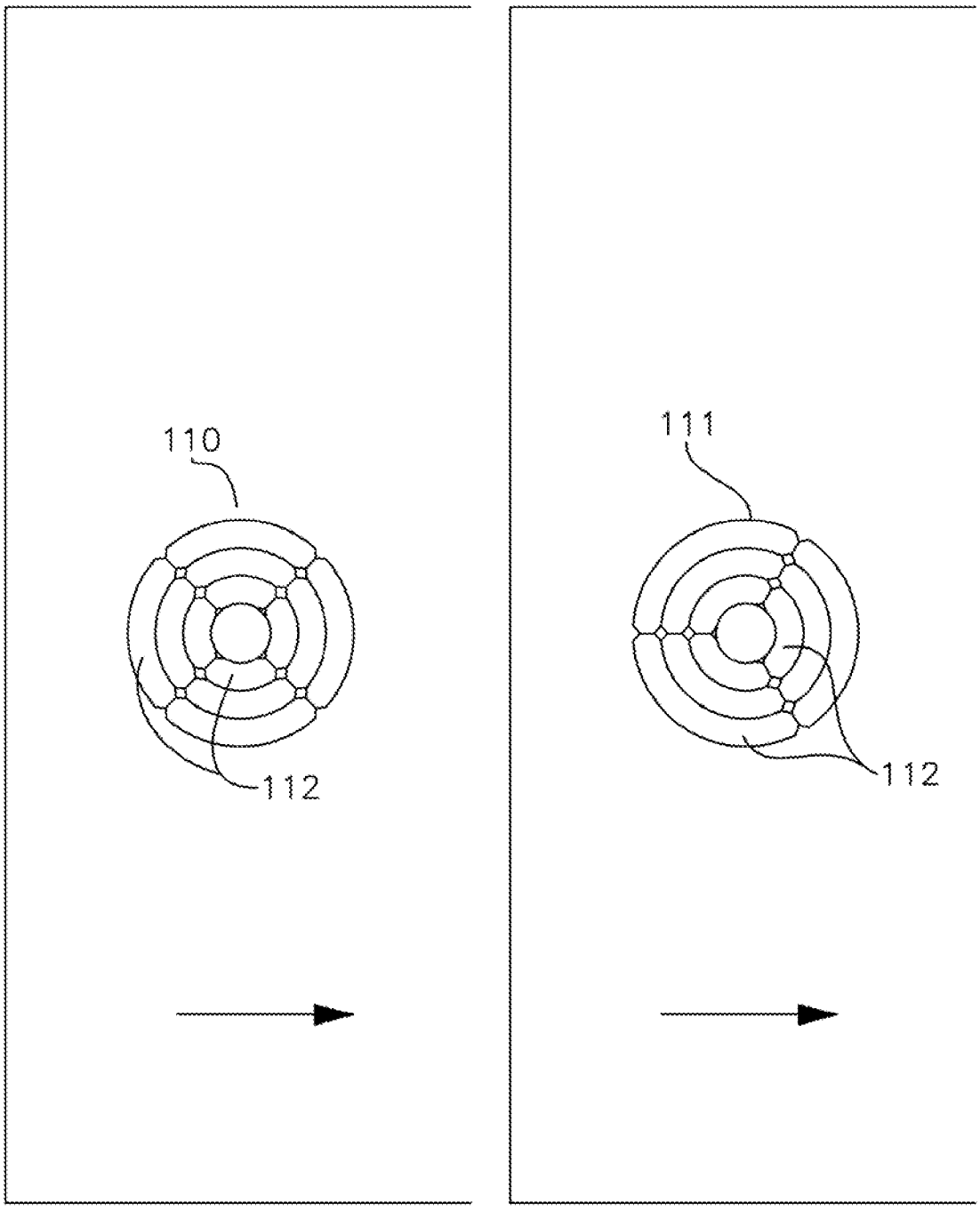

Fig. 1A

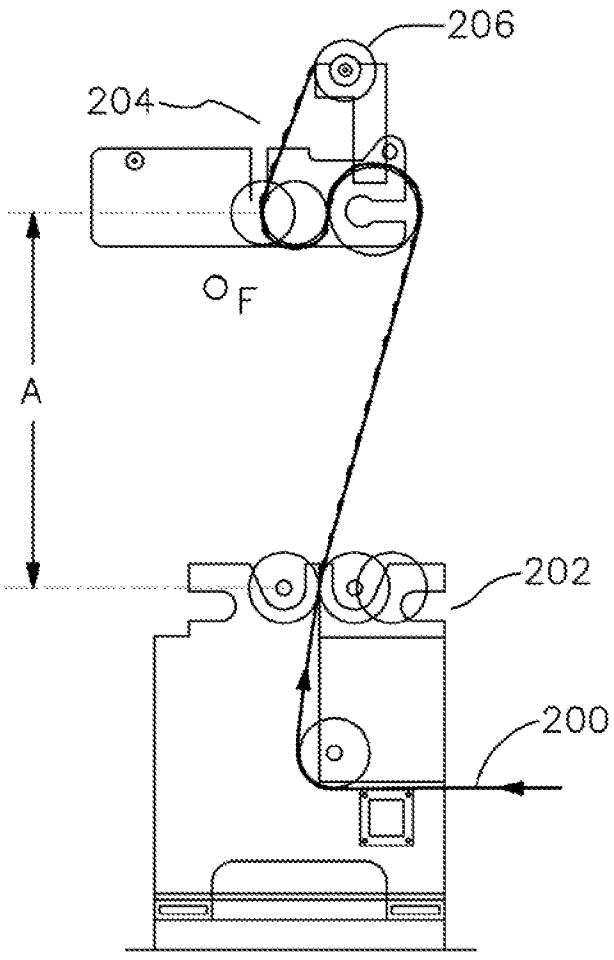

Fig. 2

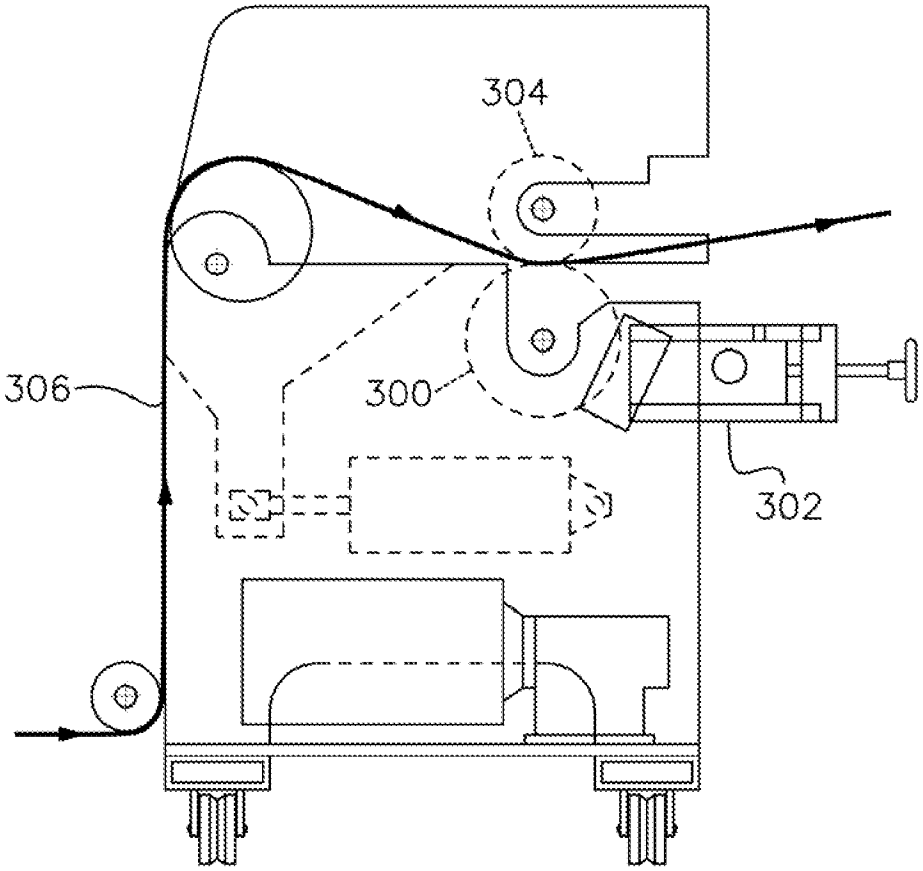

Fig. 3

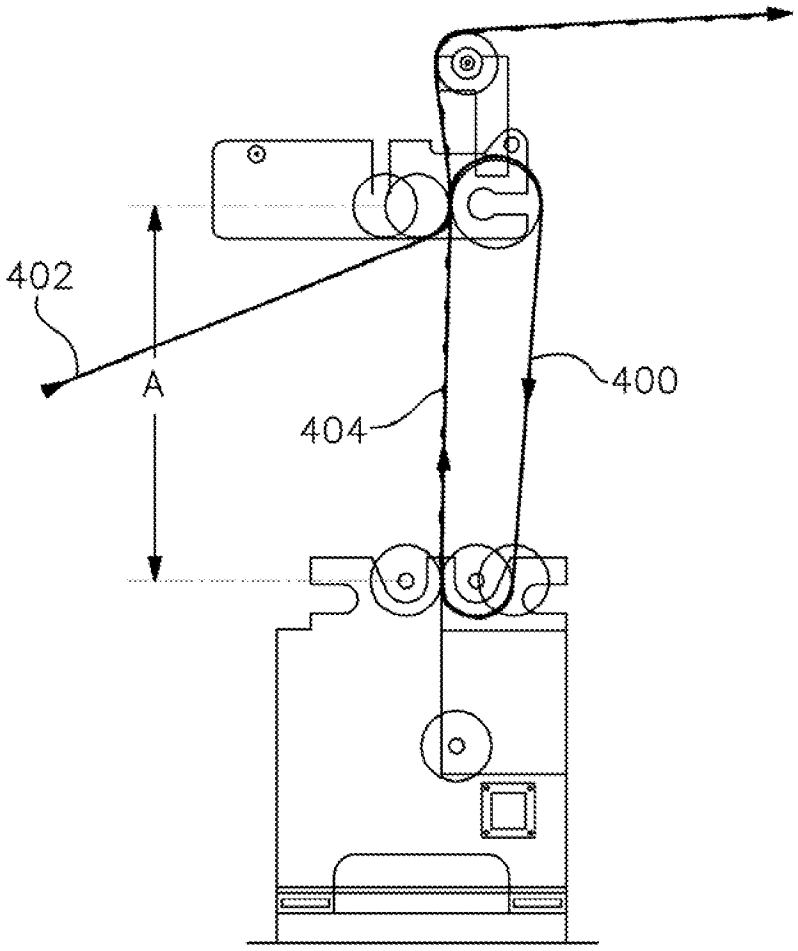

Fig. 4

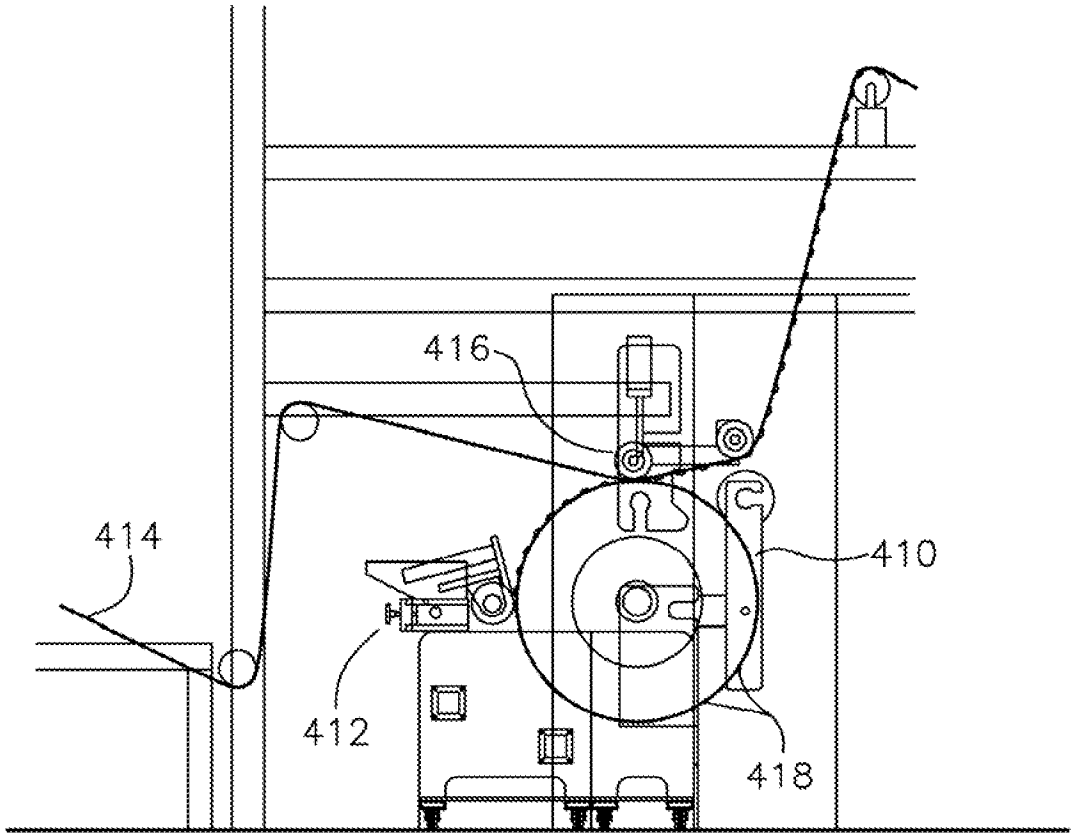

Fig. 4A

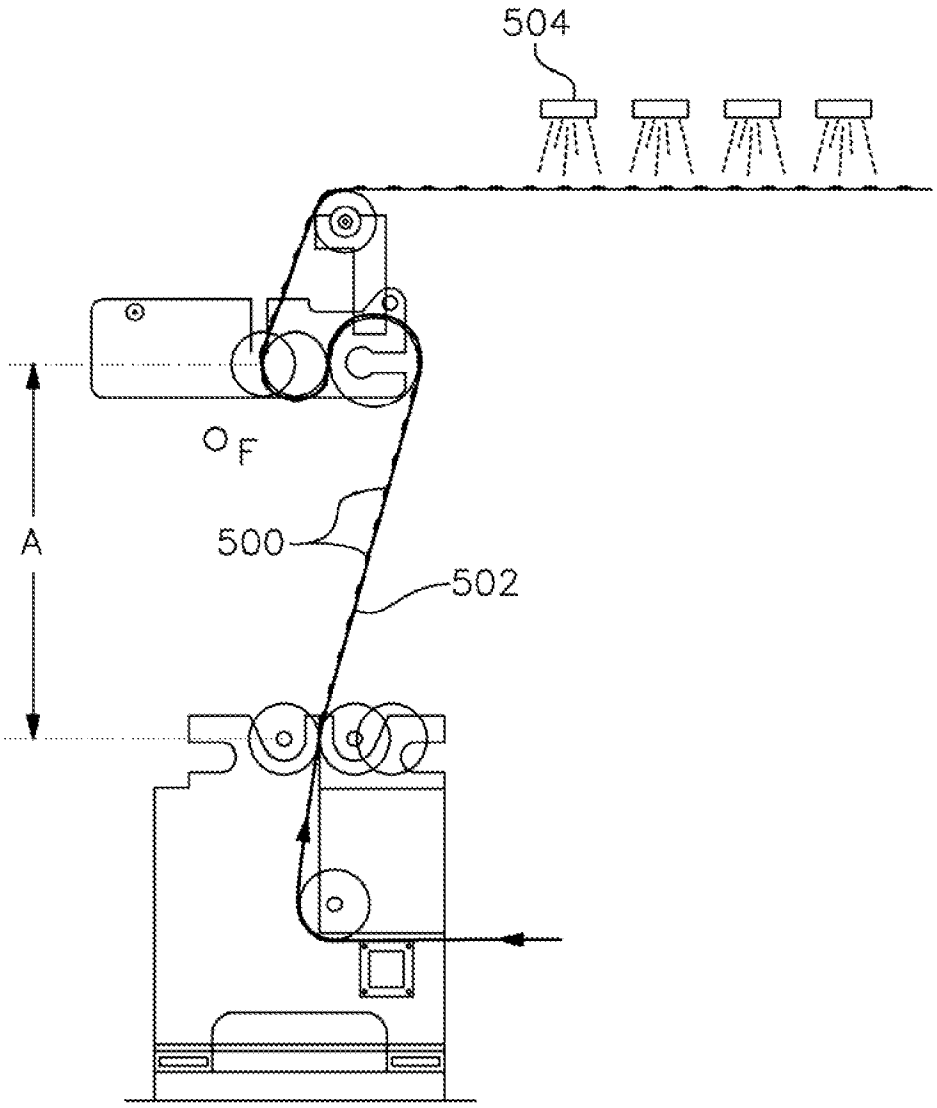

Fig. 5

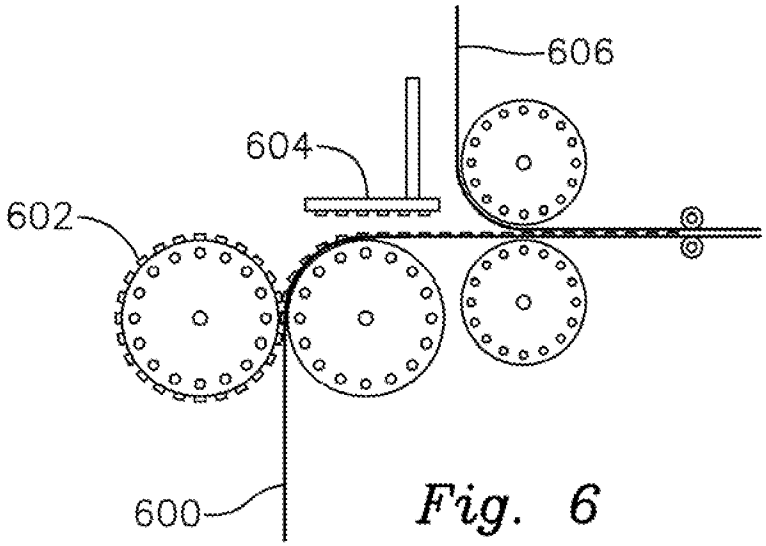

Fig. 6

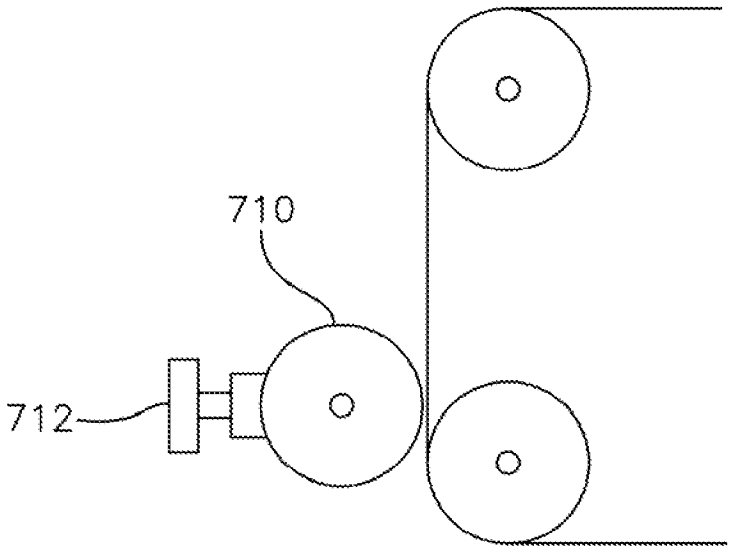

Fig. 7A

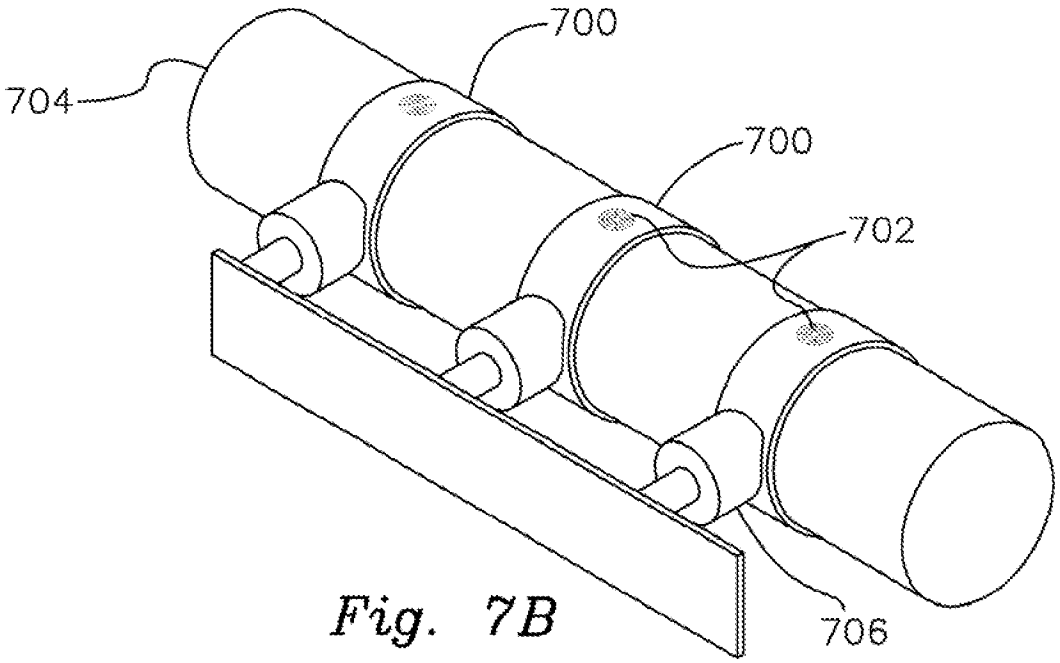

Fig. 7B

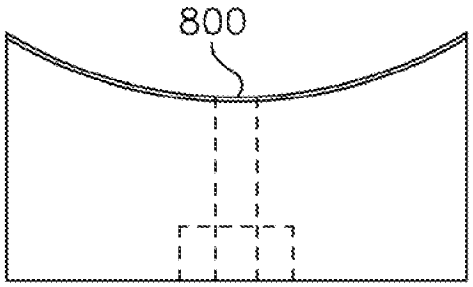

Fig. 8A

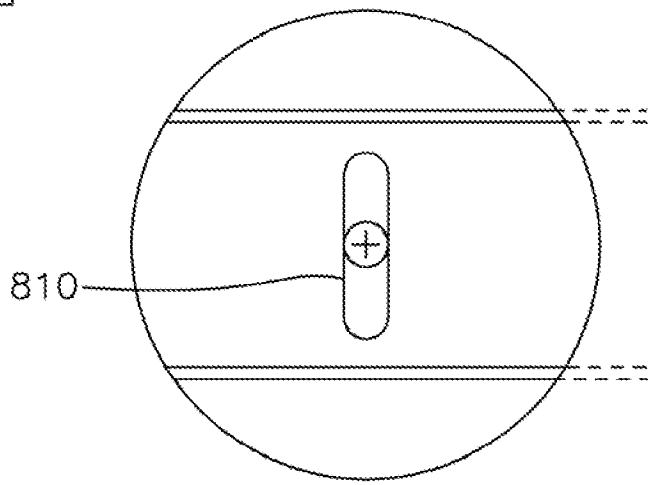

Fig. 8B

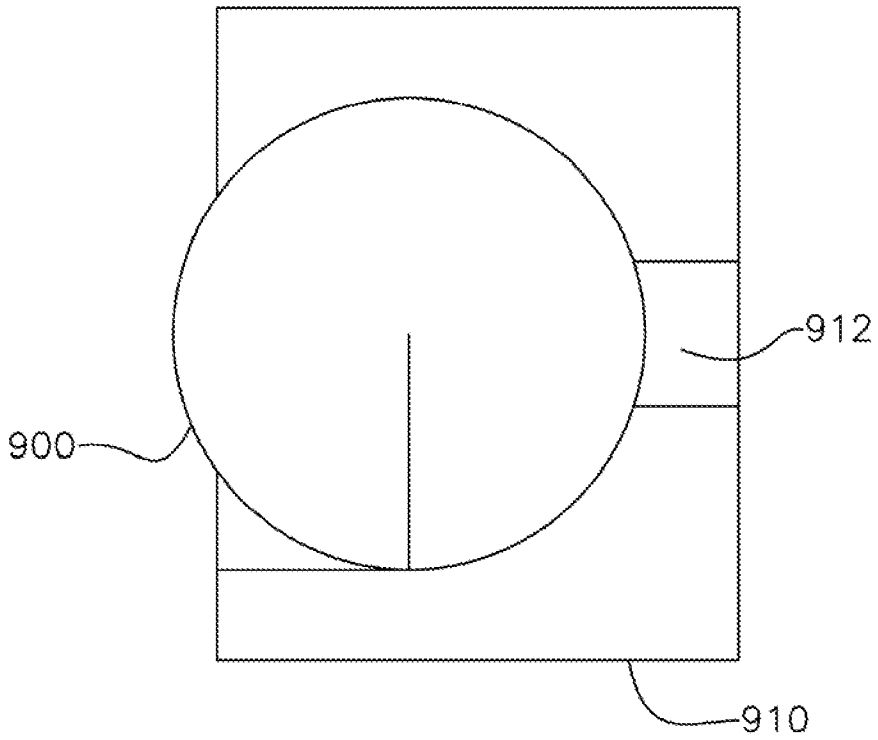

Fig. 9

PTO/SB/01 (08-03)
Approved for use through 07/31/2006 OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

☑ Declaration Submitted With Initial Filing *OR* ☐ Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)

Attorney Docket Number	
First Named Inventor	Collins, et al.
COMPLETE IF KNOWN	
Application Number	
Filing Date	
Art Unit	
Examiner Name	

I hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Print Methodology for Applying Polymer Materials
To Roofing Materials to Form Nail Tabs or Reinforcing Strips

(Title of the Invention)

the specification of which

☑ is attached hereto

OR

☐ was filed on (MM/DD/YYYY) ☐ as United States Application Number or PCT International Application Number ☐ and was amended on (MM/DD/YYYY) ☐ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? Yes	No
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

PTO/SB/01 (06-03)
Approved for use through 07/31/2003. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

DECLARATION Utility or Design Patent Application

Direct all correspondence to: ☐ Customer Number: _____ OR ☐ Correspondence address below

Name

Address

City | State | ZIP

Country | Telephone | Fax

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 willf l false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR: ☐ A petition has been filed for this unsigned inventor

Given Name (first and middle [if any]): DAVID ALLAN
Family Name or Surname: COLLINS

Inventor's Signature: David A. Collins Date: 5-26-04

Residence: City: HOUSTON State: TEXAS Country: U.S.A. Citizenship: U.S.A.

Mailing Address: 11302 MEMORIAL DRIVE

City: HOUSTON State: TEXAS ZIP: 77024 Country: U.S.A.

NAME OF SECOND INVENTOR: ☐ A petition has been filed for this unsigned inventor

Given Name (first and middle [if any]): GEORGE WILLIAM
Family Name or Surname: JACKSON

Inventor's Signature: George W. Jackson Date: 5-26-04

Residence: City: HOUSTON State: TEXAS Country: U.S.A. Citizenship: U.S.A.

Mailing Address: 3100 WALNUT BEND #222

City: HOUSTON State: TEXAS ZIP: 77042 Country: U.S.A.

☑ Additional inventors or a legal representative are being named on the 1 supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.

PTO/SB/02A (08-03)
Approved for use through 08/31/2003. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

DECLARATION

ADDITIONAL INVENTOR(S)
Supplemental Sheet
Page 3 of 3

Name of Additional Joint Inventor, if any:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))	Family Name or Surname		
Miguel E	Madero O'Brien		
Inventor's Signature		Date 25/4/04	
Mexico City, D.F Residence: City	State D.F.	Mexico Country	Mexican Citizenship
Mailing Address SIERRA AMATEPEC 371, LOMAS DE CHAPULTEPEC			
Mailing Address			
City MEXICO	State D.F.	Zip 11000	Country MEXICO

Name of Additional Joint Inventor, if any:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))	Family Name or Surname		
Inventor's Signature	Date		
Residence: City	State	Country	Citizenship
Mailing Address			
Mailing Address			
City	State	Zip	Country

Name of Additional Joint Inventor, if any:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))	Family Name or Surname		
Inventor's Signature	Date		
Residence: City	State	Country	Citizenship
Mailing Address			
Mailing Address			
City	State	Zip	Country

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips
First Named Inventor/Applicant Name:	David A. Collins
Filer:	James Daniel Petruzzi
Attorney Docket Number:	FFC-500-003

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	82	82
Utility Search Fee	2111	1	270	270
Utility Examination Fee	2311	1	110	110
Pages:				
Claims:				
Independent claims in excess of 3	2201	1	110	110
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**572**

Electronic Acknowledgement Receipt

EFS ID:	7003087
Application Number:	12704981
International Application Number:	
Confirmation Number:	7359
Title of Invention:	Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips
First Named Inventor/Applicant Name:	David A. Collins
Customer Number:	29281
Filer:	James Daniel Petruzzi
Filer Authorized By:	
Attorney Docket Number:	FFC-500-003
Receipt Date:	12-FEB-2010
Filing Date:	
Time Stamp:	15:43:29
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Electronic Funds Transfer
Payment was successfully received in RAM	$572
RAM confirmation Number	2424
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Transmittal Letter	Transmittalimg.pdf	327530 0df0590f5f300e9175622555a3e80a3d0627b026	no	2
Warnings:					
Information:					
2	Transmittal of New Application	UtilityTransimg.pdf	430994 44f88a8d213a78f52d3263698b43e49b102c89bf	no	1
Warnings:					
Information:					
3	Specification	SpecContimg.pdf	7401921 dc89eb045d128c09662e76ff44a7aedf3462ba4e	no	26
Warnings:					
Information:					
4	Drawings-only black and white line drawings	Drawingsimg.pdf	562361 2cba5c4b90c2e138a8d6bbcfe860fa35ec86d23f	no	10
Warnings:					
Information:					
5	Oath or Declaration filed	DeclarationContimg2.pdf	1164617 0880f5c2fd4cc969b3d104159c3baa15db0a3028	no	3
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Information:					
6	Fee Worksheet (PTO-875)	fee-info.pdf	36375 614ad6163883ae063385498ee26090b38efc41e0	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	9923798	

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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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Collins et al.	)	Group Art Unit: To be assigned
	)	
Appln. Serial No.: to be assigned	)	Examiner: To be assigned
	)	
Filed: Herewith	)	
	)	
For: Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips	)	

TRANSMITTAL OF NON-PROVISIONAL PATENT APPLICATION

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

Sir:

Please file the following enclosed documents in the subject patent application:

1. Transmittal with Certificate of Transmission;
2. Utility Transmittal Form PTO/SB/05
3. Non-Provisional Patent Application;
4. Ten Sheets of Drawings Referencing Figures 1 through 9; and
5. Executed Declaration Form PTO/SB/01 from previous application.

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. § 1.8(a)(1)(i)(C)
Date of Transmission: 12 February 2010
I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office (USPTO) via the USPTO electronic filing system (EFS-Web) on the date shown above. By: /James D Petruzzi 35,644/ James D. Petruzzi

The forgoing documents are being filed via the U.S. Patent and Trademark Office's

EFS-Web electronic filing system. A filing fee of $655.00 is being transmitted herewith.

Please link this application to Customer No. 29281 so that its status may be checked via the PAIR System.

Respectfully submitted,

12 February 2010
Date

/James D Petruzzi 35,664/
James Petruzzi
Reg. No. 35,644
Mason and Petruzzi
4900 Woodway
Suite 745
Houston, Texas 77056
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CUSTOMER NO. 29281

ATTORNEY FOR APPLICANT

SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN that We, David A. Collins, of Houston, Texas, George William Jackson of Houston, Texas, and Miguel E. Madero O'Brien of Mexico City, Mexico, have invented a new and useful

Print Methodology for Applying Polymer Materials

To Roofing Materials to Form Nail Tabs or Reinforcing Strips

of which the following is a specification.

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. § 1.8(a)(1)(i)(C)
Date of Transmission: 12 February 2010
I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office (USPTO) via the USPTO electronic filing system (EFS-Web) on the date shown above.
By: /James D. Petruzzi 35,644/ James D. Petruzzi

[00011] TITLE OF THE INVENTION

[00012] Print Methodology for Applying Polymer Materials To Roofing Materials to Form Nail Tabs or Reinforcing Strips

[00013] CROSS REFERENCE TO RELATED APPLICATIONS

[00014] This application is a continuation of divisional application No. 11/475,455 filed June 27, 2006 from co-pending application No. 10/855,264 filed May 27, 2004, now issued as U.S. Patent No. 7,201,946 and is related to the following U.S. patent applications: provisional patent application number 60/474,194 titled Machine and Method for Applying Thermoplastics and Adhesives To Roofing Materials with Nail Tabs filed May 29, 2003 and provisional patent application number 60/485,774 titled Machine and Method for Applying Thermoplastics and Adhesives To Roofing Materials with Nail Tabs filed July 9, 2003, which are hereby incorporated by reference as if fully set forth herein.

[00015] STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[00016] Not applicable

[00017] BACKGROUND OF THE INVENTION

[00018] The invention relates generally to roofing materials or other building materials normally employed as cover materials over a wood roof deck or stud wall and more specifically to such cover materials and methods for incorporating therein a plurality of integrally formed nail tabs or a continuous reinforcing strip.

[00019] The Typical Roof Composition.

[000110] A roof installation generally comprises at least two distinctive layers applied over a roof deck with each layer being comprised of a separate roofing material. The first layer is an underlayment, usually a substantially asphalt saturated substrate material that attaches directly to the roof deck, oftentimes a wood frame of wood studs and plywood sheets or board material. The second layer is made up of the shingles, rolled roofing, wood shakes, and metal or tile roof coverings themselves. The shingles and rolled roofing are substantially made from a fiberglass or other inorganic fibrous material coated with a substantially asphalt or asphalt-mix coating, stone granules and other materials. Specific materials, layers of materials and actual application methods differ by manufacturer and type of building application. Normally, the underlayment assists in making the roof resistant to water intrusion.

[000111] The Typical Underlayment Substrate.

[000112] The underlayment is usually an asphalt saturated substrate. The starting material for the underlayment, or the substrate material itself, is a base composite material usually referred to as "dry felt" or "organic felt", but the substrate material could also be a fiberglass mat or other inorganic material mat or a hybrid of both. Examples of types of dry felt starting material are rag, paper, wood sawdust and could include fiberglass or other inorganic material, oftentimes in a fibrous state, although other suitable starting base materials may be employed. The starting base material, in a preferred embodiment, is a fibrous paper called dry felt made from treating recyclable cardboard, mixed recycled papers and wood sawdust or a fibrous mat made from inorganic materials chemically or mechanically formed into a fibrous state; however, this invention is not limited thereto. The term "substrate" used herein is used generically for all suitable starting base material including dry felt, fiberglass mat and polyester mat or any other base material on which a composite roofing or building material is built upon. Dry felt, when

saturated with an asphalt-based material, produces an underlayment roofing material known in the trade as "tar paper" or "saturated felt," which is produced in various grades depending upon thickness and weight. Fiberglass mat and polyester mat when coated with an asphalt, rubber-asphalt or asphalt-mix material produce the base substrate for shingles and other residential and commercial rolled roofing products.

[000113] The Underlayment Installation.

[000114] Regardless of the type of underlayment roofing material that has been employed, common practice in the installation industry has been to unroll a length of the underlayment material and affix each length to the roof deck or building sides support sheets or boards at a plurality of locations so that it stays in place prior to the installation of the covering shingles. The affixing or fastening devices for this material are generally staples and nails. Staples and nails are readily applied by power devices; however, both are notoriously susceptible to either pulling out of the sheets or boards when there is uplift on the underlayment or, when the staples or nails stay in place, tearing of the roofing material at the fastening locations. Even when shingling is to follow immediately, the underlayment can still be exposed alone to windy and other adverse conditions, such as when the installers walk or crawl on the underlayment.

[000115] Moreover, it is desirable that the underlayment be securely attached independently of the shingles, wood shakes, metal tile or other roof covering not only in the pre-shingling or pre-roof covering stage of installation, but also in the final installation. This is because shingles or other roof coverings do get damaged, blown or ripped off the roof under adverse weather conditions and a secure independently installed underlayment will provide some interim protection from the weather elements prior to roof repair. When the underlayment is not securely fastened, then the underlayment may be blown away or ripped concurrently with shingle damage.

[000116] Current Underlayment Installation Practice Using Washers.

[000117] To securely install the underlayment and avoid the tearing described above, it has long been a common practice to either use roofing nails with large heads or to use an auxiliary large washer or tab that lies underneath the nail head. Such large washer or tab successfully resists being torn through as with a smaller nail head of regular size. The use of such washer or tab has not been totally satisfactory, however, since such use is time consuming, somewhat expensive, and can be somewhat dangerous when the installation is on a fairly steeply pitched roof and/or the conditions are inclement. This is because it requires two hands to either slip the washer over the nail or to hold a tab down while driving the nail through. If the installer has to reach while only supporting himself or herself on a toe board, it may be uncomfortable and/or unstable to be unable to use either hand for additional support when necessary. Moreover, nails with large, unconventional heads are not recommended both because they are expensive and because they cannot be used in ordinary power equipment. Ordinarily, power equipment for driving nails can be loaded only with standard nail cartridges.

[000118] It is an advantage of the present invention to provide a gravure printing or offset printing process for the application of polymer nail tabs or continuous strips to underlayment or other roofing material.

[000119] It is another advantage of the present invention to provide a lamination process for the deposition of polymer material to form nail tab or continuous strips on underlayment or other roofing material.

[000120] It is yet another advantage of the present invention to provide an underlayment or other roofing material with a plurality of nail tabs or continuous reinforcement strips applied through a gravure or other printing process.

[000121] It is still yet another advantage of the present invention to provide a method for applying polymer material through a pressurized delivery system in a gravure or other printing process.

[000122] It is another advantage of the present invention to provide a system for depositing a plurality of generally rounded tabs to underlayment or other roofing material using an etched pattern or an open pattern, with no cell walls or other points of interruption within the pattern.

[000123] It is another advantage of the present invention to provide a system for depositing a line of polymer material onto underlayment, or any other roofing material.

[000124] BRIEF SUMMARY OF THE INVENTION

[000125] The invention is to the print method, a gravure, rotogravure or gravure-like transfer printing (the "gravure process") or offset printing, of an appropriately viscous and substantially polymeric material onto roofing material, or onto a continuous transfer material and then transferred, including utilizing a laminating process, onto the roofing material, in a continuous process. The gravure process employs a print cylinder which has etched or engraved cells of varying depth, width and shape and which cells can be varied to apply differing amounts of tab material as a means of controlling the pattern and other attributes of the resultant nail tab.

[000126] A composite roofing material includes a final condition underlayment, roll roofing or shingle material having bonded thereto appropriate rows of nail tabs or continuous reinforcing strips preferably made of, either in total or in part, a polymer material, including but not limited to an adhesive or plastic-based material, including thermo-plastic, thermo-setting, hot-melt adhesive, elastomer or ultra-violet light curing materials, and can include materials of contrasting color to the roofing material or any other materials which tailor the primary polymeric material's properties.

[000127] The material used or applied in the print methodologies described herein, to form nail tabs or continuous reinforcing strips on the roofing materials, are substantially polymer materials (the term "tab material" is used herein to describe these materials). The polymer materials specifically include, but are not limited to, thermoplastics, thermosets, adhesive, including light

curable adhesives, and elastomers and include any additives which tailor the polymer material's properties. Specifically, for example, the tab material may be reinforced with fibers, metal, flakes or other similar particles or my be diluted with fillers or simply air.

[000128] A gravure or other print process is used to apply substantial polymer tab or continuous strip material to an engraved cylinder, and then wipe the tab material from the cylinder's surface with a doctor blade, leaving the tab material only in the engraved image areas on the cylinder. Each engraved image area etched into the cylinder, commonly called the print cylinder, creates a depression, the design of which controls the shape, width and thickness of the formed nail tabs.

[000129] The process to make the nail tabs or the continuous reinforcing strip is to convey the substrate material and/or the saturated underlayment, roll roofing or shingle material in a continuous process and into contact with an etched cylinder and with sufficient pressure so that the roofing material picks up the tab material left in the depressions on the cylinder while the tab material is in a liquid state and to form tabs of appropriate size and appropriately patterned across the roofing material's surface.

[000130] In an alternative, a continuous transfer material is in contact with the etched gravure print cylinder and with the roofing material with sufficient pressure so that the continuous transfer material both picks up the tab material left in the depressions on the print cylinder and transfers the tab material onto the roofing material while the tab material is in a liquid or semi-liquid state and to form tabs or continuous reinforcing strips of appropriate size and appropriately patterned across both the continuous transfer material and the underlayment, roll roofing or shingle material.

[000131] In accordance with a preferred embodiment of the invention, there is disclosed a method of making a roofing material, which comprises treating an extended length of substrate roofing material or composite roofing material having the steps of depositing tab material substantially in

a liquid state onto the surface of the roofing material at a plurality of locations, the tab material solidifying and bonding to the surface of the roofing material wherein the tab material is deposited on the roofing material by an engraved pattern print roll.

[000132] In accordance with another preferred embodiment of the invention, there is disclosed a method of making a roofing material comprising the steps of depositing tab material at a plurality of locations substantially made of a polymer material in a liquid state onto a transfer surface, the transfer surface receiving the tab material for deposition onto the roofing material.

[000133] In accordance with another preferred embodiment of the invention, there is disclosed a roofing material, which comprises a substrate roofing material or composite roofing material and tab material substantially made of a polymer material in a liquid state deposited onto the surface of the roofing material at a plurality of locations, the tab material solidifying and adhering to the surface of the base substrate material or saturated or coated material wherein the tab material is deposited on the roofing material by a print roll having an engraved pattern for holding the tab material.

[000134] In accordance with another preferred embodiment of the invention, there is disclosed a roofing material, which comprises a base substrate material or a saturated or coated material and a plurality of thermoplastic, thermosetting, adhesive or elastomer tabs deposited onto the surface of the base substrate, saturated or coated material at a plurality of locations, wherein the tabs are deposited on the saturated or coated material by a print roll having an engraved pattern for holding the thermoplastic, thermosetting, adhesive or elastomer tab material.

[000135] Other advantages of the present invention will become apparent from the following descriptions, taken in connection with the accompanying drawings, wherein, by way of illustration and example, embodiments of the present invention are disclosed.

[000136] The drawings constitute a part of this specification and include exemplary embodiments to the invention, which may be embodied in various forms. It is to be understood that in some

instances various aspects of the invention may be shown exaggerated or enlarged to facilitate an understanding of the invention.

[000137] BRIEF DESCRIPTION OF THE SEVERAL DRAWINGS

[000138] Figure 1 shows a schematic diagram of a doctor blade and print cylinder according to a preferred embodiment of the invention.

[000139] Figure 1A shows a plan view of two alternative etched patterns for a print roll according to a preferred embodiment of the invention.

[000140] Figure 1B shows cross section of a portion of roofing material and tab material according to a preferred embodiment of the invention.

[000141] Figure 2 shows a schematic diagram of gravure print apparatus according to a preferred embodiment of the invention.

[000142] Figure 3 shows a side view of a gravure print apparatus according to a preferred embodiment of the invention.

[000143] Figure 4 shows a schematic of a gravure print transfer process according to a preferred embodiment of the invention.

[000144] Figure 4A shows a schematic diagram of a gravure print transfer process with a drum, roll, or wheel.

[000145] Figure 5 shows a side view of a gravure print process with ultra violet or other light curable process.

[000146] Figure 6 shows a side view of tab material being printed on a transfer surface or being laminated directly onto the roofing material.

[000147] Figure 7A shows a side view of a gravure printing apparatus according to a preferred embodiment of the invention.

[000148] Figure 7B shows a perspective view of print cylinder with raised lanes, in which the pattern is engraved, and pressurized delivery system according to a preferred embodiment of the invention.

[000149] Figure 8A shows a cross sectional side view of a tab material delivery mechanism according to a preferred embodiment of the invention.

[000150] Figure 8B shows a top plan view of a tab material delivery mechanism according to a preferred embodiment of the invention.

[000151] Figure 9 shows a cross sectional side view of an alternative tab material delivery and print roll mechanism according to a preferred embodiment of the invention.

[000152] So that the manner in which the above recited features, advantages and objects of the invention, as well as others which will become apparent, are attained and can be understood in detail, more particular description of the invention briefly summarized above may be had by reference to the embodiment thereof which is illustrated in the appended drawings, which drawings form a part of this specification. It is to be noted, however, that the drawings illustrate only a preferred or alternate embodiment of the invention and is therefore not to be considered limiting of its scope as the invention may admit to other equally effective embodiments.

[000153] DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[000154] Detailed descriptions of the preferred embodiments are provided herein. It is to be understood, however, that the present invention may be embodied in various forms. Various aspects of the invention may be inverted, or changed in reference to specific part shape and detail, part location, or part composition. Therefore, specific details disclosed herein are not to be interpreted as limiting, but rather as a basis for the claims and as a representative basis for teaching one skilled in the art to employ the present invention in virtually any appropriately detailed system, structure or manner.

[000155] In accordance with the preferred embodiments of the invention, we disclose several new and useful methods and roofing materials using these methods:

[000156] that an improved method in which tabs can be permanently and reliably affixed or bonded to either dry felt, saturated felt, a fiberglass, polyester or other inorganic substrate roofing material whether or not coated with asphalt or an asphalt mix, or roll roofing material or shingles can be automated using an appropriately viscous tab material that quickly solidifies and adheres or bonds to the surface of the roofing material;

[000157] that appropriately viscous tab material, in its total or in its part, is substantially, polymer material, specifically including, but not limited to, thermoplastic, thermosetting, hot-melt adhesives, elastomers, and ultra-violet curing materials and is or is not of at least one contrasting color to the roofing material and is mechanically delivered and/or gravity fed to the automation process, although tabs may be composed of other materials using this process;

[000158] that the automation process is a gravure, rotogravure, intaglio or gravure-like transfer printing process (the "gravure process"), or an offset printing process, which employs a print cylinder that directly prints an engraved pattern onto the roofing material or onto a continuous transfer material and then presses or laminates that pattern onto the roofing material, in a continuous process which utilizes pressure, whether or not the actual pattern shape survives the use of pressure and the result could be the tab material or continuous strip material appears more evenly distributed on the roofing material;

[000159] that the print cylinder is a plate or metal cylinder which has etched or engraved patterns of the same or varying depth, width or shape and which pattern characteristics control the shape, width and thickness of the formed or resultant nail tab,

[000160] that the engraved pattern is preferably less than or equal to fifty one-thousands of an inch (50/1,000ths) or 50 mils deep, a circular, continuous strip other geometric, shape approximately 1 to 2-inches in diameter, and consisting of only an outer cell wall or one or more

individually etched or cells with distinct cell walls. Patterns as deep as 1 mil up to 100 mils or more may be suitable for certain applications depending on the substrate roofing material and the tab material to be deposited. The inventive method of the present invention is capable of depositing such tab materials and with engraved patterns of such depths;

[000161] that the roofing material or the transfer material is preferably in continuous contact with an etched cylinder and with sufficient pressure so that the roofing material or the transfer material picks up the tab material left in the depressions on the cylinder while the tab material is in a liquid state and to form tabs or continuous strips of appropriate size and appropriately patterned across the roofing material surface;

[000162] that the continuous transfer material is, most preferably, a continuous belt or coated or covered drum, roll, wheel or other cylindrical or other geometric shape, including a flat level or shaped inclined surface, which has the appropriate surface chemistry characteristics such that its surface has the ability to both accept the appropriate amount of tab material, including but not limited to, a substantially polymer material such as thermoplastic, thermosetting, hot-melt adhesive, elastomer or ultra-violet curing material from the print pattern, under an appropriate amount of pressure, and then to release it onto the substrate or composite roofing material or shingle material,

[000163] that during the manufacturing of roofing material with nail tabs or continuous reinforcing strips, the continuous transfer material will remain in substantial contact with both the print cylinder and the roofing material at different points, such that the point or points of transfer or lamination of the tab material onto the roofing material will be with an appropriate amount of pressure and with the tab material in either a liquid, semi-liquid or less than fully cured state and of the appropriate size and appropriately patterned across the continuous transfer material; and

[000164] that the above described invention can be employed directly onto the roofing material, at any point during the manufacture of commercially saleable rolls of saturated felt or tar paper, or

other roofing material, including immediately before or after the dipping of the substrate roofing material into the asphalt or asphalt mix tank, or after the manufacturer of any rolled roofing or shingle product.

[000165] that the closed applicator or fountain that holds the substantially polymer material is protected mechanically from contamination from the asphalt oils and other impurities that arise from

[000166] printing on a heated surface covered in asphalt and other materials.

[000167] Turning now to Figure 1, there is shown a schematic side view of the basic gravure method for laying substantially polymer material tabs on the roofing material. A print cylinder 100 receives a viscous tab material into patterns etched into the face of the print cylinder 100 from the print reservoir 102 and prints a pattern onto the roofing material 104, which pattern approximates or equals the etched pattern which on the print cylinder 100. A doctor blade 108 wipes excess tab material from the print cylinder leaving tab material only in the engraved image area etched into the print cylinder 100. Each engraved image area etched into the print cylinder 100 creates a depression, the design of which controls the shape, width and thickness of the formed nail tabs or reinforcing strips. Print cylinder 100 deposits the viscous tab material onto roofing material 104 when said print cylinder 100 and impression cylinder 106 make contact with said roofing material. In a preferred embodiment, roofing material 104 may be comprised of a composite of materials, including the base substrate roofing material (roofing material prior to its saturation or coating with a substantially asphalt or asphalt-mix material), or the final condition underlayment, roll roofing or shingle material. In a process such as described herein, roofing material 104 may be bonded with appropriate rows of nail tabs or continuous reinforcing strips, preferably substantially polymer materials, specifically including but not limited to, thermoplastic-based or thermo-setting material, hot-melt adhesive material, elastomeric material or ultra-violet light curing materials, and may include at least one contrasting color to the roofing material 104 and one or more additives to tailor the polymer material. As is well known in the art, roofing

material 104 can be comprised of a substrate roofing material or of a composite roofing material, made starting with a substrate roofing material, including a roll of dry felt, fiberglass, polyester or a combination thereof, mat material. In a preferred method of producing the roofing material in accordance with this invention, the substrate, dry felt or fiberglass and polyester mat material is introduced to the beginning of a continuous and automated process having a system of driven rollers for transporting roofing material 104 through the process. Dry felt or fiberglass mat material undergoes treatment in conventional fashion to impregnate, saturate or otherwise surround or coat the organic or fiberglass and polyester mat fibers with asphalt to produce an asphalt saturated felt, mat or substrate material.

[000168] There are four basic components to the gravure or offset processes unit: an engraved print cylinder, the tab material fountain, including the hot bar assembly and the heated knife assembly, the doctor blade and the impression roll. Additionally, the design of the engraved pattern and the composition of the tab material are also important. In the second embodiment, two additional components are basic: the surface and composition of the continuous transfer material and the press rolls or lamination equipment.

[000169] The gravure process is a type of intaglio process in which an actual image is etched into the surface of a plate or metal cylinder. When the cylinder is rotated in or up against a fountain of suitable and appropriately viscous tab material, the tab material goes into the etched image in the cylinder and the excess tab material in the non-image area of the plate or cylinder is removed by a scraper blade, commonly called a "doctor blade." The size, depth and shape of each pattern etched as an image on the plate or cylinder determines how much tab material will ultimately be deposited on the roofing material, as well as the ultimate shape of the deposited tab material. When the roofing material or the continuous transfer material is passed between the plate or cylinder with the engraved pattern, commonly called the "print cylinder," and another cylinder, commonly called the "impression roll," the roofing material or transfer material acts like

a blotter and absorbs the appropriate amount of tab material from each engraved pattern. In the preferred embodiment, the impression roll is covered in a material which allows depressions into its surface, oftentimes a rubber or rubber-like covering is utilized. This covering allows either the roofing material, which would pass between the print and impression cylinders, or the transfer surface itself to be pressed into the etched image on the print cylinder and pick up the tab material in the etched image on the print cylinder. The hardness of this covering can, in part, determine how much tab material is transferred to the roofing material. At the point of contact the tab material is drawn out of the engraved pattern and onto the roofing material or transfer material by capillary action. The roofing material or transfer material is brought into contact with the print cylinder with the help of the impression roll and an appropriate amount of pressure mechanically created between the two rolls.

[000170] FIGURE 1A shows a top plan view of two etched patterns 110 and 111 which can be used to deliver the desired amount of tab material directly to the roofing material or to the transfer material. Etched patterns 110 and 111 can be of a variety of shapes or sizes, and may have internal depressions, protrusions and the like. For example, the etched pattern may be a depressed cylindrical shape, with no internal features, any number of cell wall divisions, or have a pattern at the base of the cylindrical shape such as tetrahedral, pyramidal or spike protrusions which would act to hold the polymer tab material in the etched or depressed pattern until the tab material is delivered to the roofing material or transfer material. In a preferred embodiment shown, the patterns are primarily clear or consist of a plurality of small open areas 112 which allows a precise amount of the viscous tab material to be applied to the roofing material and adhere to said roofing material hardening into the desired shape and thickness. These small open areas may be either continuous or self-contained.

[000171] FIGURE 1B is a side view of the tab material 120 as it resides on top of the roofing material 122 after being deposited by a circular clear or open pattern. The tab material 120 can

be substantially comprised of polymer material, including, but not limited to, thermo-plastic, thermo-setting, hot-melt adhesive, elastomeric or ultra-violet light curing material, and can include materials of contrasting color to the roofing material or any other materials which tailor the primary polymer material's properties. Tab material 120 used or applied in the print methodologies, described herein, to form nail tabs or continuous reinforcing strips or other regions on the roofing materials can be comprised of substantially polymer materials. Tab materials 120 are affixed to the roofing material through any of the printing processes described herein.

[000172] FIGURE 2 shows a side view of the gravure process print module 202 and press role module 204 directly printing the tab material onto the roofing material 200. Tab material could be printed in discreet tabs, intermittent or continuous strips which result in a reinforcement of the roofing material 200. Roofing material 200 is then assembled into rolls 206 (or could continue forward into the machine's finish looper, etc., which is not shown), as shown in the press rolls module 204. However, in the preferred embodiment, these modules are inserted into an existing asphalt roofing machine which accomplishes the actual winding of the finished roll or stacking of the shingles.

[000173] FIGURE 3 is a schematic side view of a print module according to a preferred embodiment of the invention. Although the actual configuration, web path, roll placement, etc. may vary, this is one preferred embodiment where the print cylinder 300 is pressed against the impression cylinder 304. Print cylinder 300 receives an appropriately viscous tab material from the print reservoir 302 and prints an engraved pattern onto the roofing material 306. Print cylinder 300 deposits the viscous tab material onto roofing material 306 when said print cylinder 300 and impression cylinder 304 make contact with roofing material 306.

[000174] FIGURE 4 is a schematic side view of the alternate embodiment of the print methodology utilizing an offset print process or transfer belt 400 to affix tab material 404 onto the

roofing material 402. The transfer belt 400 mechanism is shown attached to, wrapped around, the impression roll of the print module, with the print roll pressed against the belt to deliver the tab material, with the other end of the transfer belt wrapped around one of the rolls in the press module. As previously disclosed the continuous transfer material is, preferably, a continuous transfer belt 400 or coated or covered drum, roll, wheel or other cylindrical or other geometric shape, including a flat level or shaped inclined surface, which has the appropriate surface chemistry characteristics such that its surface has the ability to both accept the appropriate amount of tab material 404, from the print pattern, under an appropriate amount of pressure, and then to release it onto the roofing material 402. Roofing material 402 is understood to include, but not limited to, substrate roofing or composite roofing material or shingle material.

[000175] FIGURE 4A is a side view of the alternate embodiment utilizing the transfer material as a coating or covering on a transfer surface 410 in the cylindrical shape, such as a single drum, roll(s) or wheels. Transfer surface 410 receives an appropriately viscous tab material 418 from the print mechanism, reservoir 412 and prints an engraved pattern onto the roofing material 414 during contact with the transfer surface 410 and the impression cylinder 416. In this embodiment, more than one impression cylinder may be used. While this figure shows transfer surface 410 in the cylindrical shape, any other shape surfaces could be used which hold roofing material 414 against the tab material 418 while the tab material 418 is in contact with the transfer surface 410.

[000176] In this embodiment, the continuous transfer material is, preferably, a continuous seamless belt or coated cylinder or other appropriately covered or coated flat or geometric shape. The surface of the belt, coated cylinder or other covered surface shape has the appropriate surface chemistry characteristics to both accept and release the tab material quickly, typically before one complete revolution of either material or before the roofing material moves off of the transfer surface. A typical revolution is the cycle between the transfer surface

accepting a deposit of the tab material and subsequently releasing the tab material. The transfer material's surface must attract the appropriate amount of tab material from the engraved pattern upon its contact with the print cylinder. The transfer material's surface must also release primarily all of the desired amount of tab material it attracts from the print cylinder onto the roofing material. During the tab materials contact with both the transfer material and the roofing material, the tab material is held via a press or lamination process. The roofing material is held in contact with the tab material while the tab material is in contact with the transfer material with one or more cylinders or other appropriate flat or other geometric shape and an appropriate amount of pressure. The press or lamination process occurs before the tab material is fully cured and while the tab material is in a liquid or semi-liquid state. At the appropriate moment, either before or after the polymer tab material is cured, the roofing material web path separates from the transfer material's surface.

[000177] All of the components, basic or otherwise, in the gravure process or in the alternate embodiments of the gravure process, the gravure-like transfer printing process or the offset process, are coordinated with the operations of the existing saturation line equipment. Further, additional coatings or materials may be applied after the deposition of the tab material such as ink-based insignia or logos printed on top of the tab material at desired locations.

[000178] The tab material may include only one or a combination of the following: polymer materials, including, but not limited to, thermoplastics, thermosetting, hot-melt adhesives, elastomers, ultra-violet or other light curing materials, a colored material or any other additive materials to tailor the polymer materials. The tab material may be reinforced with fibers, metal, flakes or other similar particles, may be diluted with fillers or air, and such tab material may also include a color contrasting dye to that of the underlying saturated or coated roofing material, which is normally black. The term "tab material" would include what is described herein. Even

without an added dye, however, the resultant nail tabs may contrast in color and appear readily visible.

[000179] By the time the roofing material with tabs reaches a "finished and/or free looper" or finished roll winder stage in the typical saturation or rolled roofing manufacturing process or the shingle cutting or packaging stage in a typical shingle manufacturing line, the tab material and/or other component materials of the tab or continuous reinforcing strips are sufficiently cooled and hardened to not adversely effect the operational conditions of the manufacturing line equipment. That is, they are tough, but flexible and if tacky, only slightly tacky.

[000180] FIGURE 5 is a schematic side view of the ultra violet or other light curable process. Viscous polymer tab material 500 specifically including, but not limited to, thermoplastics, thermo sets and elastomers, any of which can be cured to a hardened state by ultraviolet or other light curable processes, and any additives which tailor the substantially polymer material's properties. Polymer materials such as adhesive materials including liquid adhesive, hot-setting adhesive and light curable material may also be used as tab material 500. Tab material is printed onto roofing material 502 as discussed herein then cured or dried with ultra violet or other light curable processes or methods as is well known in the art. A light 504 or series of lights delivers the ultra violet or light curing to the roofing material 502 hardening tab material 500.

[000181] FIGURE 6 is a side view of the tab material being printed onto a transfer surface 600. The transfer surface 600 is either disposable, such as in a pure on-line lamination usage, or used in a continuous loop, as in a belt or cylinder covering. The transfer surface receives the tab material from the print cylinder 602. In the embodiment shown a heating mechanism 604 is used to keep the tab material liquid or soft, i.e. to retard curing until the press/lamination. Roofing material 606 is laminated or pressed with the transfer surface to move the tab material onto the roofing material 606.

[000182] Figure 7A shows a side view of the print cylinder 710 in contact with the tab material applicator 712, with the print cylinder 710 and applicator 712 shaped so as to deposit viscous tab material only inside the depressions within the print cylinder formed by the etched patterns. The tab material applicator 712 is pressed up against the print cylinder and has a continuous flow of tab material available and applied against a raised portion of said cylinder that carries the etched patterns.

[000183] FIGURE 7B shows a perspective view of the print cylinder and tab material delivery mechanism of a preferred embodiment of the invention. Print cylinder 704 has a plurality of raised sections 700 which are situated on and above the base circumference of the print cylinder. The raised portions have etched patterns 702 (previously disclosed in figure 1A and shown in their preferred embodiments) which are positioned in the middle of the raised portions and are in contact with the tab material delivery mechanism or tab material applicators 706. The applicators or fountainheads are positioned in tight conformity with the print cylinder to minimize contamination of the tab material with asphalt oils and other contaminants that are associated with the roofing material. The applicators may or may not overlap the raised portions of the print cylinder. In the preferred embodiment, the applicators overlap the raised portions of the print cylinder to aid in keeping the liquid tab material from oozing out. However, this appears to be a function of the accuracy of the machining of the two parts: the print cylinder and the applicators. Etched patterns 702 receive an appropriately viscous tab material from the applicators 706 under pressure. The applicators are configured to fit the curvature of the print cylinder and thereby only apply tab material into the etched pattern when the pattern is directly in line with the applicator. The applicator then delivers adhesive to the pattern which in turn rotates into contact with the roofing material web as shown in Figure 7A. As the roofing material comes into contact with the etched pattern, the substantially polymer tab material is pulled out of the pattern

depression and deposited onto the roofing material in recurring fashion creating a series of tabs or continuous strips on the roofing material.

[000184] Applicators 706 and their associated mechanical supports may be heated by any available means such as electrical cartridge heaters, hot-oil heat exchange or the like. Substantially polymer material may be ported to any place into the applicator or fountainhead to deliver tab material to the etched patterns. Said applicators can be any shape with or without integral doctor blades.

[000185] FIGURE 8 is a cross section view of a applicator comprised of a concave surface matching the curvature of the raised sections of the print cylinder as described in figure 7. A delivery channel 800 delivers the viscous tab material from the applicator that is in fluid communication with the channel. Tab material is under constant and steady pressure from the back of the applicator and applies material through the channel and into the etched patterns.

[000186] The applicator or "fountainhead" for delivering the substantially polymer tab material mates closely to the print cylinder for the purposes of transferring the said tab material to a web of roofing material. The retention volume of the fountainhead may be minimized to aid in delivering substantially uncontaminated tab material to the print roll or print cylinder. The "retention volume" refers to the effective volume that may become contaminated by convective or diffusive mixing with roofing material contaminants and oils involved in the process.

[000187] FIGURE 8A is a top plan view of the tab material applicator according to a preferred embodiment of the invention. The center portion of the concave surface of the applicator rides on the raised section of the print cylinder as shown in figure 7B. The applicator or fountainhead is closed on all sides mating to the print cylinder such that it forms a moving or rotary seal to the print cylinder. The leading edge of the fountainhead (edge opposing the direction of motion of the print cylinder) sheds asphalt oils and other contaminates which may emanate from the roofing material and/or transfer from the print cylinder. The fountainhead or tab material delivery

system almost entirely envelops the raised portion of the rotating print cylinder such that the tab material delivered is further protected from contamination. The delivery channel center bore 810 allows viscous tab material to flow and be deposited on the etched patterns on the raised sections of the print cylinder only when the applicator is in direct contact with the etched pattern. Although a small portion of the tab material may escape from the sides of the applicator as it is pressed up against the print cylinder, the vast majority of the tab material is deposited into the etched patterns on the print cylinder and subsequently deposited onto the roofing material. Further, having a tight conformance of the applicator to the raised portion of the print cylinder minimizes contamination of the tab material by asphalt oils and other undesirable contaminants from the roofing material .

[000188] Figure 9 shows an alternative embodiment where a fountainhead or tab material delivery system substantially entirely envelops the rotating print cylinder such that the tab material that is ultimately delivered to the roofing material is further protected from contamination. Fountainhead block 910 is configured to conform to the outer circumference of print cylinder 900. Fountainhead block 910 may run the length of print cylinder 900 or in a preferred embodiment individual blocks would be positioned for each line of tabs or continuous strips. For example, if there are three rows of tabs being applied by the print cylinder to the roofing material, there would be three fountainhead blocks each delivering tab material to the etched pattern on the cylinder. Applicator 912 is positioned against the print cylinder to deliver tab material to the print cylinder etched patterns. It may be either a reservoir or the type of pressurized delivery system as previously described. The exposed side of print cylinder 900 is pressed up against the roofing material upon which the etched pattern in the print cylinder deposits tab material as described earlier. By enclosing the print cylinder in this manner, contamination of the tab material is reduced. The print cylinder can be actively driven by a motor or passively driven by the moving roofing material (web) sheet.

[000189] In an alternative embodiment, the tab material may be delivered through injection from within the print cylinder itself. The tab material would be injected into the center of the print cylinder and then delivered through individual ports corresponding to the locations at which deposition of tabs or continuous strips was desired. The tab material would be under pressure and through pipes and nozzles preferably heated and applied to the roofing material through locations on the print cylinder corresponding to the tab or strip locations.

[000190] As mentioned, the final resulting roofing material products, with nail tabs or continuous reinforcing strips, just described are manufactured using a machine that includes one or more of the basic gravure printing process or gravure-like transfer printing process or offset process components. The liquid or semi-liquid tab material, or equivalent material, is normally supplied to the roofing material or transfer material in a single print and/or single press or lamination process; however, multiple passes with the same or differing tab materials, pressures, etched patterns or other materials comprising the resultant formed tab may be employed in the gravure process or offset process.

[000191] The gravure process or offset process equipment can also be engaged or disengaged by the operator without materially affecting the continuous process of the asphalt roofing manufacturing line equipment.

[000192] While the invention has been described in connection with a preferred embodiment, it is not intended to limit the scope of the invention to the particular form set forth, but on the contrary, it is intended to cover such alternatives, modifications, and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims.

CLAIMS

What is claimed is:

1. A method of making a roofing or building cover material, which comprises treating an extended length of substrate comprising the steps of:

Depositing tab material onto the surface of said roofing or building cover material at a plurality of nail tabs from a lamination roll, said tab material bonding to the surface of said roofing or building cover material by pressure between said roll and said surface.

2. A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is substantially a polymer material.

3. A method of making a roofing or building cover material in accordance with claim 1 wherein said tab material is hardened or cured by ultra-violet or visible light.

4. A method of making a roofing or building cover material in accordance with claim 1, wherein said nail tabs are formed in a continuous strip.

5. A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is deposited on said lamination roll from an engraved print roll positioned in contact with said lamination roll.

6. A method of making a roofing or building cover material in accordance with claim 1, wherein said tab material is pre-formed before contact with said lamination roll.

7. A method of making a roofing or building cover material comprising the steps of depositing nail tab material at a plurality of locations, said nail tab material is substantially made of a polymer material in a substantially liquid state, and pressure adhering said nail tab material into nail tabs on said surface with a pressure roll.

8. A method of making a roofing or building cover material in accordance with claim 7, wherein said pressure roll has an engraved pattern that presses said tab material in a pre-determined shape.

9. A method of making a roofing or building cover material in accordance with claim 7, wherein said tab material, while existing in a liquid or viscous state, is hardened or cured by means of ultra-violet or visible light.

10. A material, which comprises a substrate or a composite material, and a tab material substantially made of a polymer material deposited onto the surface of said material at a plurality of nail tab locations, said tab material solidifying and adhering to the surface of said base substrate or composite material, wherein said tab material is formed into nail tabs by a pressure roll in contact with said substrate or composite material.

11. A roofing or building cover material in accordance with claim 10, wherein said tab material contains ultra-violet or visible light curing polymers.

12. A roofing or building cover material, which comprises a base substrate material or a saturated or coated material and a plurality of thermoplastic, thermosetting, adhesive or elastomer tabs deposited onto the surface of the base substrate, saturated or coated material at a plurality of nail tabs, wherein said tabs are deposited on said substrate, saturated or coated material by a lamination roll that has pre-formed nail tabs positioned thereon.

13. A roofing or building cover material in accordance with claim 12 wherein said thermoplastic, thermosetting, adhesive or elastomer is pressure adhered to said substrate, saturated or coated material by a pressure roll.

14. A roofing or building cover material in accordance with claim 12 wherein said pre-formed nail tabs are deposited on said lamination roll by a engraved pattern print roll.

15. A roofing or building cover material in accordance with claim 12 wherein said pre-formed nail tabs are stamped on sheet material with adhesive backing.

16. A roofing or building cover material in accordance with claim 12 wherein said pre-formed nail tabs comprise a plurality of layers.

ABSTRACT OF THE DISCLOSURE

A method and apparatus for applying nail tabs to roofing and building cover materials involving the steps of depositing tab material onto the surface of the roofing or building cover material, during or after its manufacture, resulting in a plurality of nail tabs from a lamination roll, and bonding the tabs to the surface of the material by pressure between the lamination roll and said surface. The method also encompasses depositing the tab material or pre-formed tabs by a pressure roll in contact with said surface. The tabs preferably are made substantially of a polymer material and may be hardened or cured by ultra-violet or visible light. The tabs may also be pre-formed and have adhesive backing.

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/704,981

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	82		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	270		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	110		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	16 minus 20 =		x$26		OR	x$52	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	* 1	x$110	110		x$220	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $260 ($130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			195			390	
			TOTAL	572		TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
						TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
						TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest 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. Paten 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.