

(12) United States Patent

Collins et al.

(10) Patent No.:

US 8,137,757 B2

(45) **Date of Patent:**

*Mar. 20, 2012

(54) PRINT METHODOLOGY FOR APPLYING POLYMER MATERIALS TO ROOFING MATERIALS TO FORM NAIL TABS OR REINFORCING STRIPS

(75) Inventors: David Allan Collins, Houston, TX (US); George William Jackson, Houston, TX

(US); Miguel E Madero O'Brien,

Mexico City (MX)

(73) Assignee: Fast Felt Corporation, Houston, TX

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

This patent is subject to a terminal dis-

claimer.

(21) Appl. No.: 12/704,981

(22) Filed: Feb. 12, 2010

(65)**Prior Publication Data**

US 2010/0143667 A1 Jun. 10, 2010

Related U.S. Application Data

- (63) Continuation of application No. 11/475,455, filed on Jun. 27, 2006, now Pat. No. 7,666,498.
- (51) Int. Cl. B05D 1/28 (2006.01)B05D 3/06 (2006.01)B32B 7/12 (2006.01)
- (52) **U.S. Cl.** **427/428.18**; 427/508; 427/428.06
- (58) Field of Classification Search 427/508, 427/186, 188, 256, 428.06, 428.18, 428.2; 52/746.11

See application file for complete search history.

(56)References Cited

U.S. PATENT DOCUMENTS

3,003,906	Α	10/1961	Fasold et al.
4,554,196	A *	11/1985	Meeker 428/67
4,618,528	Α	10/1986	Sacks et al.
4,624,721	A *	11/1986	Sadler et al 156/92
4,627,207	A *	12/1986	Young et al 52/361
4,649,686	A *	3/1987	Backenstow et al 52/509
4,885,887	A *	12/1989	Simmons et al 52/410
4,932,171	A *	6/1990	Beattie 52/58
5,365,709	A *	11/1994	Lassiter 52/408
5,469,671	A *	11/1995	Rathgeber et al 52/58
5,599,586	A	2/1997	Israel
6,033,723	A	3/2000	Kistler et al.
6,210,757	B1	4/2001	Taylor et al.
6,451,409	B1 *	9/2002	Lassiter 428/147
6,531,027	B1	3/2003	Lender et al.
7,201,946	B2 *	4/2007	Collins et al 427/428.06
2003/0203145	A1	10/2003	Zanchetta et al.
2003/0215594	A1	11/2003	Hamdar et al.

FOREIGN PATENT DOCUMENTS

EP	023609		12/1986
WO	WO9729256		8/1997
WO	WO 98/06891 A1	*	2/1998

^{*} cited by examiner

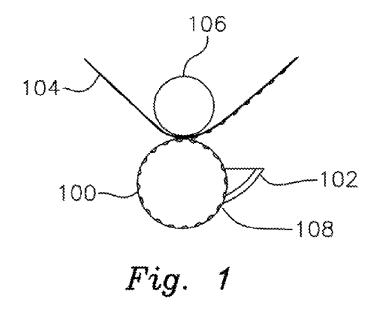
Primary Examiner — William Phillip Fletcher, III

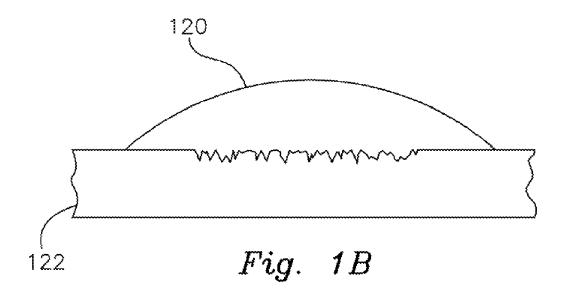
(57)ABSTRACT

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.

9 Claims, 10 Drawing Sheets







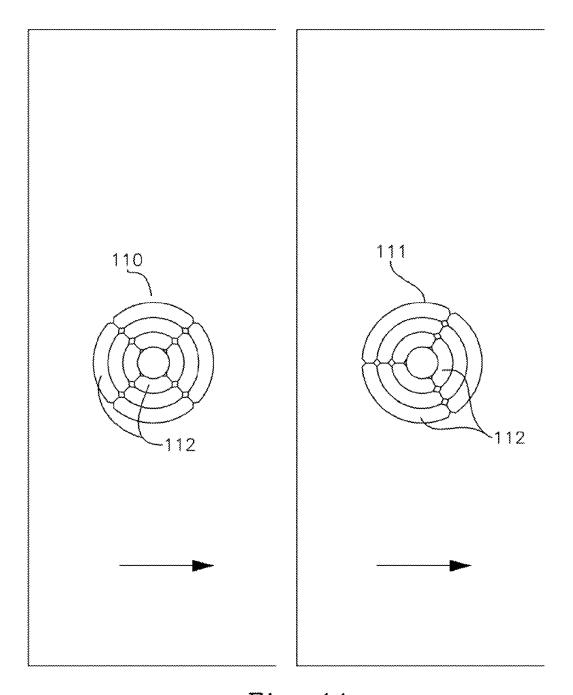


Fig. 1A



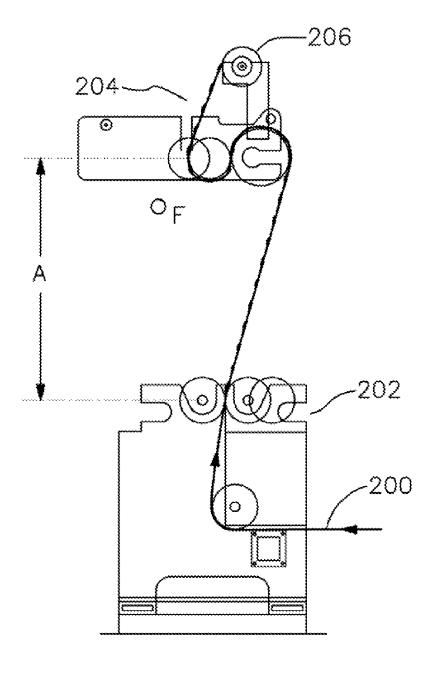


Fig. 2



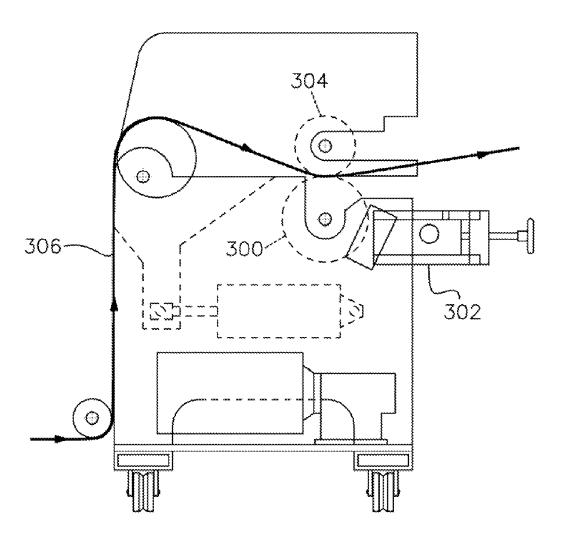


Fig. 3

DOCKET A L A R M

Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

