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(71) Applicant: **TAMKO ROOFING PRODUCTS, INC.**
**Joplin,**
**Missouri 64802-1404 (US)**

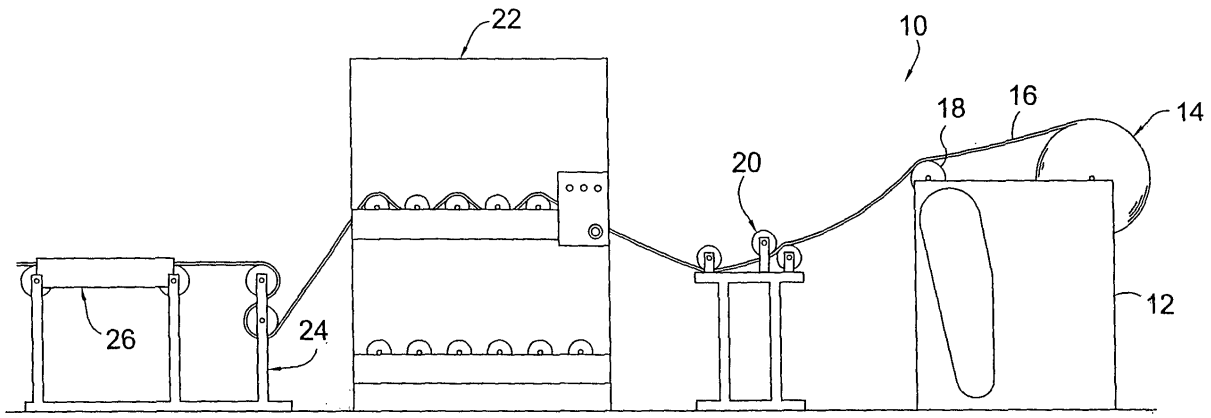
(72) Inventor: **Hobart, Aaron**
**Goodman, Missouri 64843 (US)**

(74) Representative: **Campbell, Arlene et al**
**Murgitroyd & Company**
**165-169 Scotland Street**
**Glasgow**
**G5 8PL (GB)**

(54) **Automated waterproofing membrane winder**

(57) An automated membrane finishing winder (10) improves the process for generating waterproofing membrane rolls (14). The winder is fed a membrane through a plurality of motorized pull rolls (20,22). A mandrel adapted to receive a pair of cores is positioned proximal to an output region of a finishing product winding machine. An adhesive applicator traverses the width of the cores automatically to apply an adhesive to the cores, and the automated finishing product winding machine guides a leading edge of adjacent membrane sections to the adhesive strip on the respective core to start rolls of waterproofing membrane.

*FIG. 1A.*




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# EUROPEAN SEARCH REPORT

Application Number
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## DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (IPC) |
|---|---|---|---|
| X<br>A | WO 02/44063 A (METSO PAPER KARLSTAD AB)<br>6 June 2002 (2002-06-06)<br>* the whole document * | 1<br>8,10-12, 17 | INV.<br>B65H19/28 |
| X<br>A | WO 94/25382 A (KOHLER COATING MACHINERY CORP.) 10 November 1994 (1994-11-10)<br>* the whole document * | 1<br>8,10-12 | |
| X<br>A | CA 2 227 113 A (CASPAR)<br>15 July 1999 (1999-07-15)<br>* the whole document * | 1,4<br>8,10 | |
| A | US 6 427 938 B1 (MADRZAK ET AL)<br>6 August 2002 (2002-08-06)<br>* the whole document * | 1,4,12 | |
| A | EP 0 266 494 A (RÜTGERSWERKE AG)<br>11 May 1988 (1988-05-11)<br>* the whole document * | 1,8,13 | |
| A | US 5 643 399 A (VENABLE)<br>1 July 1997 (1997-07-01)<br>* the whole document * | 13 | TECHNICAL FIELDS SEARCHED (IPC)<br>B65H |

The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| The Hague | 27 November 2006 | De Rijck, Freddy |

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## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 05 25 2212

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27-11-2006

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---|---|---|
| WO 0244063 A | 06-06-2002 | AU 1291902 A | 11-06-2002 |
| | | CA 2429689 A1 | 06-06-2002 |
| | | CN 1478048 A | 25-02-2004 |
| | | EP 1345832 A1 | 24-09-2003 |
| | | JP 2004514624 T | 20-05-2004 |
| | | JP 2006056716 A | 02-03-2006 |
| | | US 6805317 B1 | 19-10-2004 |
| WO 9425382 A | 10-11-1994 | AT 173446 T | 15-12-1998 |
| | | CA 2122792 A1 | 06-11-1994 |
| | | DE 69414702 D1 | 24-12-1998 |
| | | DE 69414702 T2 | 10-06-1999 |
| | | EP 0697007 A1 | 21-02-1996 |
| | | JP 8510709 T | 12-11-1996 |
| | | US 5383622 A | 24-01-1995 |
| CA 2227113 A | 15-07-1999 | NONE | |
| US 6427938 B1 | 06-08-2002 | NONE | |
| EP 0266494 A | 11-05-1988 | DE 3637514 A1 | 05-05-1988 |
| US 5643399 A | 01-07-1997 | US 5456785 A | 10-10-1995 |
| | | US 5620554 A | 15-04-1997 |

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82