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71 Applicant: **PHILIP MORRIS INCORPORATED, 120 Park Avenue, New York, New York 10017 (US)**

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72 Inventor: **Grollmund, Everett C., 3306 Nuttree Woods Place, Midlothian Virginia 23113 (US)**

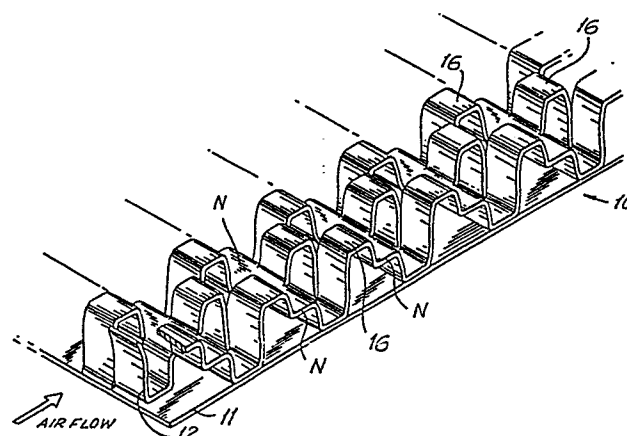
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74 Representative: **Smith, Philip Antony et al, REDDIE & GROSE 16 Theobalds Road, London WC1X 8PL (GB)**

54 **Manufacture of an expanded web of sheet material.**

57 A sheet of material is passed through meshing rotary shearing and forming dies to form rows of convolutions (16) which in each row are separated by an undeformed neutral zone N between each pair of adjacent convolutions. The rows are staggered so that the peak of a convolution in one row coincides with the troughs in adjacent rows and vice versa but the neutral zones coincide to maintain the integrity of the expanded web. The expanded web (12) can then be laminated to a plane sheet (11). The resulting structure is useful as a cigarette wrapper which is wrapped around a tobacco rod through which the longitudinal air flow is as shown by the arrow. The dimensions and periodicity of the convolutions can be adjusted to control air flow through the wrapper.





European Patent
Office

EUROPEAN SEARCH REPORT

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Application number

EP 85 30 3587

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	FR-A-1 286 127 (KRIEG & ZIVY) * Figures 5,6,9,10,14,19,39-47 *	1,2,5, 10,12, 17,19, 20	B 31 F 1/28
A	DE-C- 58 840 (WHITEFIELD BOSTWICK) * Claim; figures *	19,20	
A	DE-A-1 627 772 (PERRACHON) * Page 8; claims 1,6; figures *	1-5,13 ,14,19 ,20	
A	US-A-3 910 287 (WALTON) * Column 4, line 53 - column 5, line 6; figure 2 *	15,18	
A	US-A-3 940 529 (HEPFORD) * Column 3, lines 36-49; figures *	19,20	TECHNICAL FIELDS SEARCHED (Int. Cl.4) B 31 D B 21 D B 31 F A 24 D
A	US-A-2 539 356 (SIDE BOTHAM) * Column 4; claims; figures *	6,7,11 ,12,21 ,22	
A	US-A-3 616 077 (JESSEE) * Figures 2,4 *	9,16	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26-11-1985	Examiner PEETERS S.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
A	FR-A- 439 794 (HIRSCHWANGER)		

A	FR-A-2 020 596 (MSL)		

A	FR-A-1 349 792 (GARRETT)		

			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
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