

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 0 684 183 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
20.11.1996 Bulletin 1996/47

(51) Int Cl.⁶: **B65D 1/00, B21D 22/20,
B21D 22/28, B21D 22/26**

(43) Date of publication A2:
29.11.1995 Bulletin 1995/48

(21) Application number: **95104649.9**

(22) Date of filing: **29.03.1995**

(84) Designated Contracting States:
AT BE CH DK ES FR GB GR IT LI NL PT SE

(71) Applicant: **Jahn, Eberhard
D-41464 Neuss (DE)**

(30) Priority: **30.03.1994 DE 4411337**

(72) Inventor: **Jahn, Eberhard
D-41464 Neuss (DE)**

(54) Method of forming a slim package

(57) The invention is a methodology to form a slim package, especially a body panel, a shoulder, a neck and a forehead resulting in a consumer liquid package, made one sheet metal or sheet steel (A) and as a result of the requirement for extended material area in the shoulder (4) area of film (6) extended in area (62) by forming a structure (63); (B) following stamping at least a forehead (11), (C) simultaneously or in a following deep drawing stroke at least a section of a neck (5) and particularly one section of a shoulder (4), (D) in a second deep drawing stroke the at least not already formed section of shoulder (4) from first deep drawing stroke and at least one section of the body (3); (E) particularly further at least the shoulder (4) in a further compression station, particularly a coning process of deep drawing steps (8) The deep drawing invention produces a particularly, very price efficient and commercial manufacturing of the slim package with very low weight and quality material requirements.

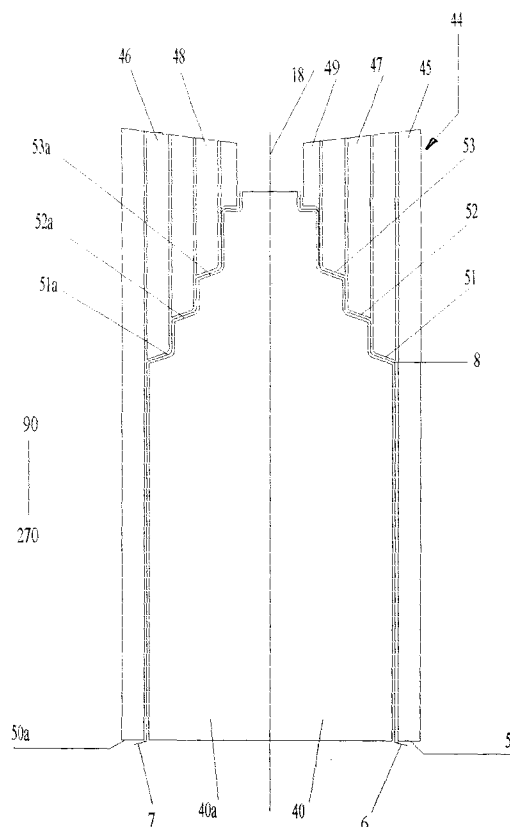


Figure 6

EP 0 684 183 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 95 10 4649

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.6)
X	EP-A-0 376 240 (ENAMI SEIKI KK) 4 July 1990	12-14	B65D1/00 B21D22/20 B21D22/28 B21D22/26
A	* the whole document *	1,9	

A	DE-A-24 51 511 (BRACHT FRIEDRICH WILHELM ING G) 6 May 1976	1	
	* the whole document *		

A	US-A-2 359 775 (MANUS)	9	
	* the whole document *		

A	FR-A-785 453 (STEYR-WERKE)		

A	US-A-4 111 032 (RAULT DANIEL RAYMOND) 5 September 1978		

A	GB-A-1 185 534 (SOCIÉTÉ D'OUTILLAGE DE BONDY ET SOPEM RÉUNIES) 25 March 1970		

A	CH-A-525 820 (SCHEIZERISCHE ALUMINIUM AG) 31 July 1972		

The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B21D
Place of search	Date of completion of the search	Examiner	
THE HAGUE	10 September 1996	Peeters, L	
CATEGORY OF CITED DOCUMENTS		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	
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			

EPO FORM 1503 03.82 (P/MC01)