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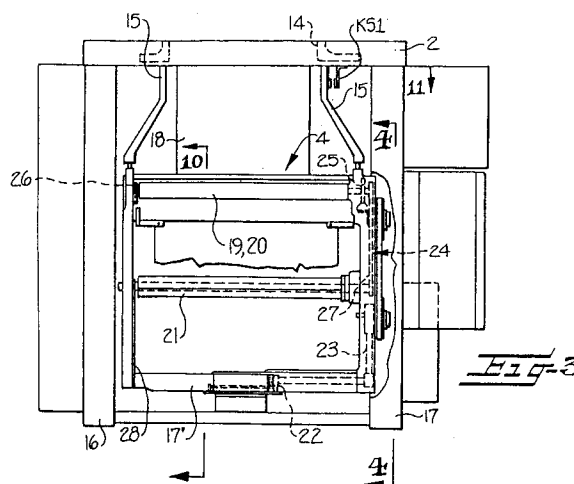
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Ullrich & Naumann, Patentanwälte,
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W-6900 Heidelberg 1(DE)(54) **Apparatus and method for winding and doffing roll of knitted cloth on a circular knitting machine.**

(57) An automatic winding and doffing apparatus of a circular knitting machine includes a winding unit (4) that revolves synchronously with the cylinder of the circular knitting machine. The apparatus includes opposed winding apparatus frame arms (16,17). A fabric winding roll (21) has one roll end pivotally mounted on one of the arms. A guide mechanism guides the knitted fabric to the winding roll. The fabric roll is stopped after a predetermined amount of fabric has been wound. A doffing apparatus doffs the fabric from the winding roll after a predetermined amount of fabric has been wound on the fabric roll. In preferred embodiment, the other winding roll end is freely supported by a turning lever (28) pivotally mounted on the frame. Upon pivoting movement of the lever arm, the winding roller may be moved from a home, winding position to an unloading, doffing position in which the other end of the winding roller is removed from the support arm. A lock mechanism operatively connects to the turning lever for locking the turning lever in a position in which the turning lever supports the winding roller in the home, winding position and for unlocking the turning lever to allow the turning lever (28) to pivot and disengage from the winding roller (21).

**Fig. 3****EP 0 485 717 A3**



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EUROPEAN SEARCH REPORT

Application Number

EP 91 11 5781

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.5)
Y	DE-A-3 704 048 (OKADA) * Abstract; figures; claims *	1	D 04 B 15/88
Y	FR-A-2 162 918 (ETUDES ET BONNETERIE) * Whole document *	1	
A	---	2,5-7, 11	
A	DE-A-3 718 659 (SIPRA) * Whole document *	1-2,4-8 ,11	
A	US-A-4 030 582 (ROBERT SAUL BROWN) * Abstract; figures; claim 1 *	1,6,7, 11	
A	GB-A-2 170 230 (PRECISION FUKUHARA)		
A	FR-A-2 240 638 (TOYO BOSEKI) -----		
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			D 04 B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 16-06-1992	Examiner DURAND F.C.
<div>CATEGORY OF CITED DOCUMENTS</div> <div>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</div> <div>T : theory or principle underlying the invention E : earlier patent document, hut 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</div>			