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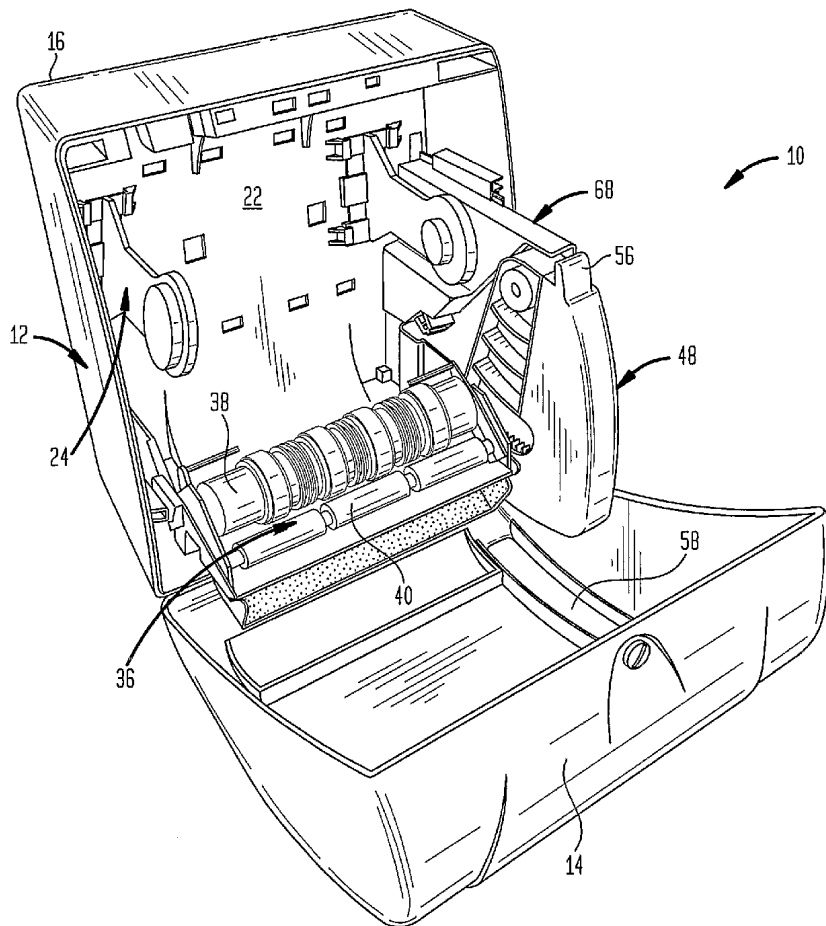
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(54) Title: TOWEL DISPENSER WITH IMPROVED DRIVE ROLL AND IMPROVED DISPENSING CHUTE



(57) Abstract: In a dispenser for dispensing rolls of paper towel including means for rotatably mounting the roll, a feed nip including a segmented drive roll with a plurality of drive surfaces and a nip roll adapted to cooperate therewith to advance the towel to a dispensing chute, an improved drive roll having an elongate axis and a plurality of drive segments defining drive surfaces disposed along its length of generally equal radius with respect to the elongate axis of the roll, as well as a plurality of guide disks interposed between adjacent drive segments configured to alleviate wrinkling as the towel is dispensed. Further improvements include a textured delivery chute and a method for dispensing a partially depleted roll of towel together with a fresh roll.



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FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,
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A. CLASSIFICATION OF SUBJECT MATTER

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USPC: 242/580,564.2

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 242/580, 564, 564.1, 564.2, 564.3, 564.4, 596.8, 615.2; 226/127-129; 312/34.22, 34.8

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,846,412 A (MORAND) 11 JULY 1989 (11.07.1989), see entire document	20
X	US 6,237,871 B1 (MORAND et al) 29 May 2001 (29.05.2001), see entire document	18
X,P	US 2003/0164079 (BUDZ et al) 04 September 2003 (04.09.2003), see entire document	11, 12, & 16
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Y		13, 15, & 17

Further documents are listed in the continuation of Box C.

See patent family annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
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"O" document referring to an oral disclosure, use, exhibition or other means		
"P" document published prior to the international filing date but later than the priority date claimed		

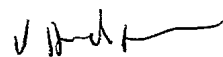
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