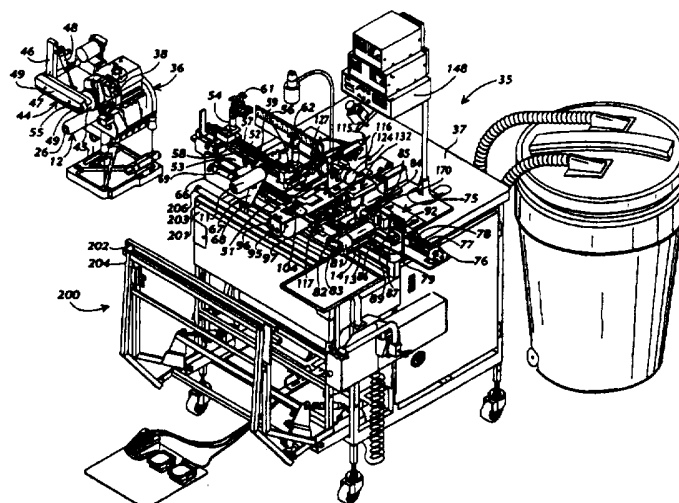




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(54) Title: WAIST BAND ATTACHMENT SYSTEM



(57) Abstract

A waist band (18) and waist edge (24) are placed in straddling relationship about spindles (11-14). The garment parts are advanced by the rotation of the spindles (11-14) past a sewing needle (17) to form a line of stitching. The end spindles (11, 13 and 14) move longitudinally along the sewing path to adjust the position of the waist band in response to the position of the folded edges (22, 23) of the waist band (18) as detected by band sensor (128), and the star wheels (119) engage and urge the waist band (18) and the garment body (19) toward or away from the sewing path (16) as controlled by band and body edge sensors (112, 129). When the previously sewn edges return to the sewing machine (36), one of the spindles (13) moves laterally to stretch the garment parts more, to remove any bunching of the waist edge (245) of the garment body (19) at the sewing needle (17), to avoid forming a wrinkle in the garment body (19).

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INTERNATIONAL SEARCH REPORT

 International application No.
PCT/US95/12172

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :D05B 27/00

US CL :112/305, 306, 470.29, 470.31, 475.09

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. : 112/152, 153, 271, 272, 273, 277, 305, 306, 322, 470.29, 470.31, 475.03, 475.05, 475.07, 475.09, 475.13

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US, A, 4,046,087 (MANETTI) 06 September 1977, see entire document.	1, 3, 4, 7-10, 22-25, 28, 33-35, 37-41, 44, and 46-49
Y	US, A, 4,681,051 (KIRCH ET AL) 21 July 1987, see entire document.	1, 3, 4, 7-10, 22-25, 28, 33-35, 37-41, 44, and 46-49
Y, P	US, A, 5,370,072 (ADAMSKI, JR.) 06 December 1994, see entire document.	8, 25, and 41
Y	US, A, 4,481,507 (TAKIGUCHI ET AL) 06 November 1984, see entire document.	10

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 ☐ See patent family annex.

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International application No.
PCT/US95/12172

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP, A, 58-11471 (TOMINAGA) 25 January 1983, see entire document.	9, 28, 48 and 49
A	US, A, 5,269,239 (ADAMSKI, JR. ET AL) 14 December 1993, see entire document.	1-49
A	US, A, 5,269,257 (YAMAZAKI) 14 December 1993, see entire document.	1-49
A	US, A, 4,928,610 (AKUTSU) 29 May 1990, see entire document.	1-49
&, P	US, A, 5,437,238 (PRICE ET AL) 01 August 1995, see entire document.	1-49