

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number:

0 330 143
A3

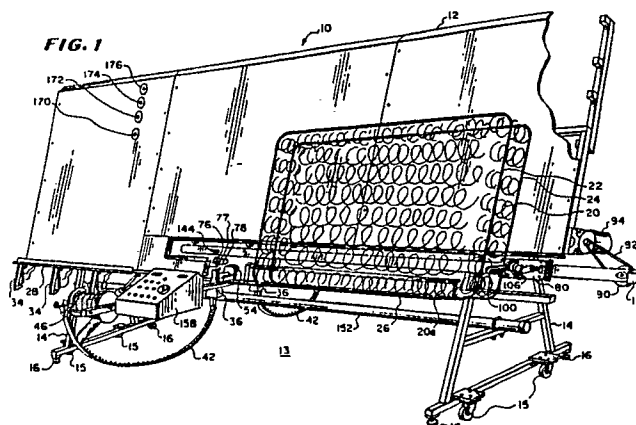
(12)

EUROPEAN PATENT APPLICATION

(21) Application number: **89102996.9**(51) Int. Cl.⁵ **B21F 33/02**(22) Date of filing: **21.02.89**(30) Priority: **22.02.88 US 158900**(43) Date of publication of application:
30.08.89 Bulletin 89/35(84) Designated Contracting States:
DE FR GB IT(68) Date of deferred publication of the search report:
22.08.90 Bulletin 90/34(71) Applicant: **HARTCO COMPANY**
7707 North Austin Avenue
Skokie Illinois(US)(72) Inventor: **Ayres, Donald, B.**
4708-C Main Street
Skokie Illinois 60076(US)
Inventor: **Gustafson, Glenn H.**
2107 Old Glenview Road
Wilmette Illinois 60091(US)
Inventor: **Langas, Arthur**
1609 Del O'gier Drive
Glenview Illinois 60025(US)(74) Representative: **Patentanwälte Deufel- Schön-**
Hertel- Lewald- Otto
Isartorplatz 6
D-8000 München 2(DE)(54) **Apparatus and method for automatically securing borderwires on mattress innersprings.**

(57) Apparatus (10) for automatically securing borderwires on mattress innerspring, including a support member (12) for maintaining a mattress innerspring (20) and borderwires (22, 24) on edge in a substantially upright position as clips are automatically wrapped along the supported edge on each side thereof. A rotatable paddle-like member (28) is pro-

vided for rotating the mattress innerspring (20) and the borderwires (22, 24) on the support member (12) to present another edge on which clips are to be wrapped. Control means is provided for carrying out, automatically, each operation performed by the apparatus.



EP 0 330 143 A3



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)
P,A	GB-A-2 201 341 (AISIN SEIKI) * Page 1, paragraphs 3,4; claim 1; figures 1-10 * ---	1-3,14, 15	B 21 F 33/02
A	US-A-4 724 590 (LANGAS) * Column 1, line 61 - column 2, line 24; column 6, lines 34-46; column 7, line 63 - column 8, line 8; figures 1-3,7,11-13,16-18 * ---	1,4,5,8 /	
A	US-A-2 239 097 (HORTON) * Page 1, left-hand column, lines 37-48; page 3, left-hand column, lines 32-45; figures 1,2 * -----	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			B 21 F A 47 C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 08-06-1990	Examiner BARROW J.
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	