



(12) **EUROPEAN PATENT APPLICATION**

(21) Application number: **91100083.4**

(51) Int. Cl.⁵: **B41F 15/10, B41F 15/12**

(22) Date of filing: **02.01.91**

(30) Priority: **28.02.90 JP 45687/90**
13.07.90 JP 184276/90
13.07.90 JP 184277/90

(43) Date of publication of application:
04.09.91 Bulletin 91/36

(84) Designated Contracting States:
CH DE FR GB IT LI NL

(88) Date of deferred publication of the search report:
23.10.91 Bulletin 91/43

(71) Applicant: **TOSHIN KOGYO CO. LTD.**
11-36, 9-chome, Minami-Mukonoso
Amagasaki-shi Hyogo-ken(JP)

(72) Inventor: **Ichinose, Shiro**
3-11, Sanno-cho, Koyoen
Nishinomiya-shi, Hyogo-ken(JP)

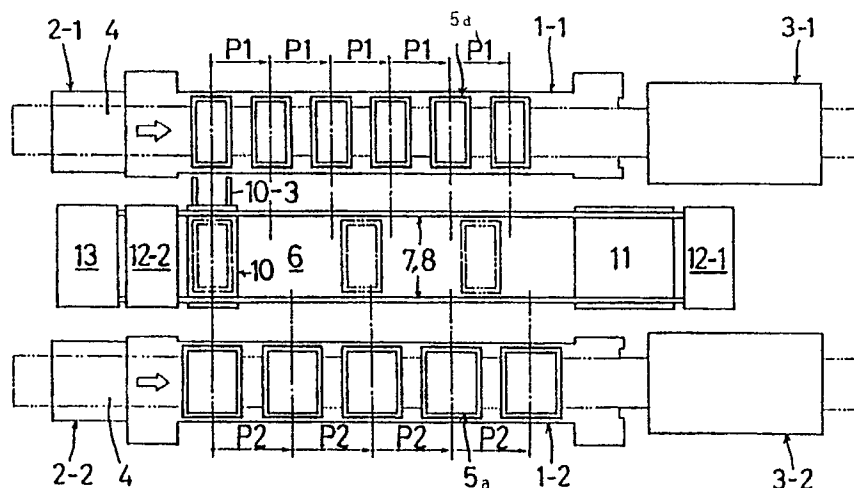
(74) Representative: **DIEHL GLAESER HILTL & PARTNER**
Patentanwälte Flüggenstrasse 13
W-8000 München 19(DE)

(54) **Screen exchange apparatus in an automatic screen printing machine.**

(57) Disclosed is a screen exchange apparatus in an automatic screen printing machine (1-1), which comprises guide rails (7,8) screen carriers, screen transfer means (10), screen washing means (11), screen raising and dropping means (12-1, 12-2) and screen-storing rack means (13). These members are arranged in specific order so that screens (5a) are moved through these members, and the screen ex-

change apparatus is arranged in parallel to the automatic screen printing machine (1-1). In this screen exchange apparatus, operations of exchanging, washing, drying, storing and taking out screens (5a) can be performed at a high efficiency without any loss of time according to the operating and working cycle of the automatic screen printing machine (1-1).

Fig. 1-A





European
Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 91 10 0083

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	EP-A-0 308 942 (MIYAKOSHI PRINTING MACHINERY CO.) * the whole document *	1-5	B 41 F 15/10 B 41 F 15/12
Y	DE-A-1 460 779 (ERICH KÄLIN) * the whole document *	1-5	
A	US-A-4 838 159 (BÖHM) * the whole document *	1	
A	PATENT ABSTRACTS OF JAPAN vol. 9, no. 183 (M-400)(1906) July 30, 1985 & JP-A-60 52 343 (TOUKIYOU KIKAI SEISAKUSHO) March 25, 1985 * the whole document *	1	
A	PATENT ABSTRACTS OF JAPAN vol. 11, no. 269 (M-621)(2716) September 2, 1987 & JP-A-62 73 946 (TOKYO KIKAI SEISAKUSHO) April 4, 1987 * the whole document *	1	
A	US-A-4 815 922 (SHIGEHISA MIDORIKAWA) * column 3, line 23 - column 5, line 20; figures *	1	TECHNICAL FIELDS SEARCHED (Int. Cl.5) B 41 F
A	GB-A-2 119 712 (BOBST SA) * page 1, line 4 - line 83; figures 1,2,10 *	1	
A	GB-A-2 046 664 (FRANK MCKAY BIGGAR III) * page 1, line 3 - line 78; figure 10 *	1	
A	NL-A-8 702 416 (STORK BRABANT B.V.) * the whole document *	1,3	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of search 28 August 91	Examiner MEULEMANS J.P.
<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 T : theory or principle underlying the invention</div> <div>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</div>			