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(54) **MOBILE SCREEN-PRINTING DEVICE, MANUFACTURING PROCESS AS WELL AS OPERATING METHOD THEREOF**

(57) The present invention relates to a mobile screen-printing device (8) for receiving a pallet (2) from a multi-station screen-printing machine with pallets (2) rotatably arranged around said machine, wherein said device (8) comprises a movable support structure and a printing station (10) comprising a screen-printing frame (4) for printing on said pallet (2); wherein the screen-printing frame (4) is displaceable relative to said pallet (2)

between a lowered position for printing and a raised position for allowing the rotation of the pallets (2); wherein the printing station (10) is mounted on said movable support structure and said printing station (10) comprises one or more lifting actuators for moving the screen-printing frame (4) relative to said pallet (2) between the lowered position and the raised position.

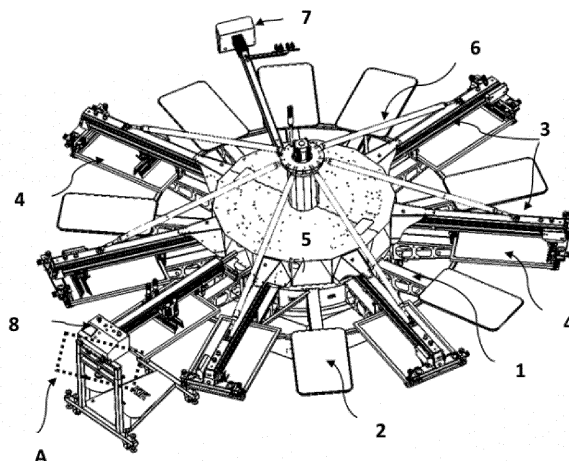


Fig. 2



EUROPEAN SEARCH REPORT

Application Number

EP 23 21 5057

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 5 158 016 A (DUBUIT JEAN-LOUIS [FR]) 27 October 1992 (1992-10-27)	1-6, 8-12	INV.
Y	* abstract * * columns 1-5 * * figures 1-5 *	8	B41F15/08 B41F15/18 B41F15/36 B41F15/42 B41F15/46
X	US 5 275 098 A (LARSON JAMES D [US]) 4 January 1994 (1994-01-04)	1-6, 8-12	B41F33/04 B41F35/00
Y	* abstract * * columns 1-6 * * figures 1-11 *	8	H05K3/12
X	CN 105 856 808 A (DONGGUAN USTAR MACHINERY TECH CO LTD) 17 August 2016 (2016-08-17)	1-9, 11, 12	
Y	* abstract * * figures 1-2 *	8	
X	US 2022/363073 A1 (FRIEDRICH KRIS OTTO [US] ET AL) 17 November 2022 (2022-11-17)	1-8, 11, 12	
Y	* the whole document *	8	
Y	CN 114 714 759 A (MAANSHAN AOKA PACKAGING TECH CO LTD) 8 July 2022 (2022-07-08)	8	TECHNICAL FIELDS SEARCHED (IPC)
	* abstract * * figures 1,3 *		B41F H05K
Y	US 2013/220773 A1 (SZEKERESCH JAKOB [DE] ET AL) 29 August 2013 (2013-08-29)	8	
	* abstract * * figures 1-6 *		
A	US 5 445 075 A (PANIPINTO CHARLES L [US]) 29 August 1995 (1995-08-29)	1-12	
	* abstract * * columns 1-14 * * figures 1-14 *		
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The present search report has been drawn up for all claims			

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Place of search	Date of completion of the search	Examiner
Munich	24 April 2024	Bellofiore, Vincenzo
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		



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Application Number

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EPO FORM 1503 03.82 (P04C01)

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	DE 10 2015 212515 A1 (THIEME GMBH & CO KG [DE]) 5 January 2017 (2017-01-05) * abstract * * paragraphs [0001] - [0065] * * figures 1-9 *	1-12	
A	US 4 724 760 A (BUBLEY HENRY J [US]) 16 February 1988 (1988-02-16) * abstract * * columns 1-11 * * figures 1-4 *	1-12	
			TECHNICAL FIELDS SEARCHED (IPC)
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 24 April 2024	Examiner Bellofiore, Vincenzo
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	

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EP 23 21 5057

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

24-04-2024

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5158016 A	27-10-1992	BR 9103649 A ES 2048045 A1 FR 2666050 A1 US 5158016 A	19-05-1992 01-03-1994 28-02-1992 27-10-1992
US 5275098 A	04-01-1994	NONE	
CN 105856808 A	17-08-2016	NONE	
US 2022363073 A1	17-11-2022	US 2022363073 A1 WO 2021087385 A1	17-11-2022 06-05-2021
CN 114714759 A	08-07-2022	NONE	
US 2013220773 A1	29-08-2013	CN 103238379 A DE 102010048909 A1 EP 2628369 A1 KR 20130119917 A US 2013220773 A1 WO 2012048771 A1	07-08-2013 12-04-2012 21-08-2013 01-11-2013 29-08-2013 19-04-2012
US 5445075 A	29-08-1995	NONE	
DE 102015212515 A1	05-01-2017	DE 102015212515 A1 EP 3317106 A1 HU E043635 T2 PL 3317106 T3 US 2018186147 A1 WO 2017005576 A1	05-01-2017 09-05-2018 28-08-2019 31-01-2020 05-07-2018 12-01-2017
US 4724760 A	16-02-1988	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82