



(11) **EP 1 386 734 A1**

(12) **EUROPEAN PATENT APPLICATION**
published in accordance with Art. 158(3) EPC

(43) Date of publication:
04.02.2004 Bulletin 2004/06

(51) Int Cl.7: **B41F 5/24**

(21) Application number: **02724319.5**

(86) International application number:
PCT/ES2002/000189

(22) Date of filing: **18.04.2002**

(87) International publication number:
WO 2002/085627 (31.10.2002 Gazette 2002/44)

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR
Designated Extension States:
AL LT LV MK RO SI

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(30) Priority: **20.04.2001 ES 200101011 U**

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(54) **IMPROVED FLEXOGRAPHIC PRINTER**

(57) An improved flexographic printer consisting of a structure (11) upon which a printing cylinder (12) is installed, to which a stencil (20) is attached, having in a diagonal sense in the upper part and left side, two rollers (15) with different diameters for the passage of corrugated cardboard or the like (30), having three equidistant rollers (14) in the lower part assembled on a part

(17) collaborating as a centre of rotation of the three ceramic or anilox cylinders (14), having an ink chamber (10) equipped with a double squeegee and incorporating an interlocking cylinder (16) producing the rotation of the roller (11), impression on the corrugated cardboard or the like (30) with the collaboration of three rollers (14).

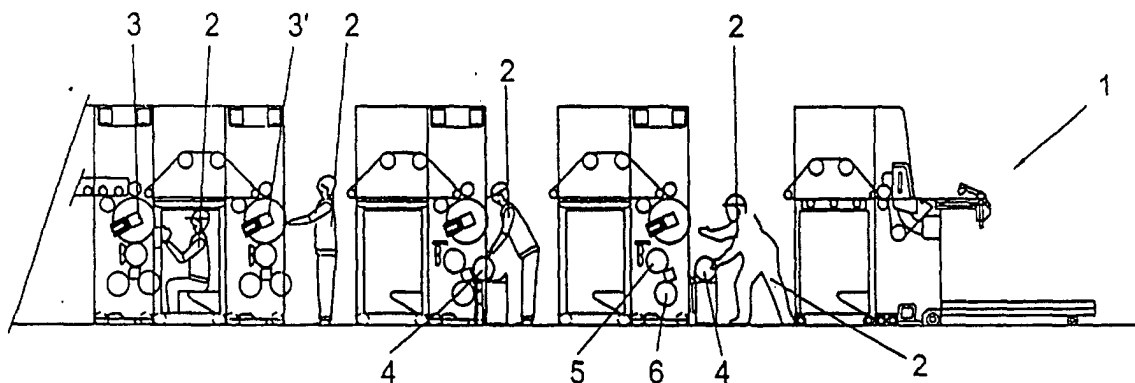


FIG. 1

Description

OBJECT OF THE INVENTION

[0001] The present specification refers to an improved flexographic printer whose purpose lies in achieving from it a better printing quality in the sector, with impression requiring differentiated frames of the anilox rollers whether printing over coated or absorbent papers.

[0002] The invention is based on coupling three anilox rollers in the same machine by means of the return system, permitting the mechanism to rotate and fix in the work position each one of the three anilox rollers, with different frames, which have been placed in each machine to comfortably and quickly use the selected anilox roller.

[0003] The invention gives time to easily disassemble each anilox roller for cleaning, its replacement or transfer to another machine of similar application.

FIELD OF THE INVENTION

[0004] This invention is applicable within the industry dedicated to manufacturing printing machines, and more specifically, within the flexographic printer machines.

BACKGROUND OF THE INVENTION

[0005] The applicant ignores the current existence of an invention having the features described in the present specification.

[0006] It should be mentioned that at present, flexographic machines printing on corrugated cardboard solely and exclusively use a single anilox cylinder in each machine and the replacement and cleaning operation of this roller or anilox cylinder is very tedious.

DESCRIPTION OF THE INVENTION

[0007] The improved flexographic printer proposed by the invention, is configured as a clear novelty within its specific field of application, achieving an improved printing quality in the sector, with impression requiring differentiated anilox roller frames, according to how the printing is done, that is, if performed over coated or absorbent paper.

[0008] More specifically, the improved flexographic printer is constituted as from a printing cylinder with a diameter substantially greater than that of those ceramic rollers incorporated in the lower part, upon which an ink chamber acts, having a double displaceable squeegee, the printing cylinder having the greater dimensions of two rollers of differentiated diameter, positioned diagonally in the upper part and left side thereof.

[0009] The stencil is incorporated on the surface of the printing cylinder, permitting, the passage of card-

board or a similar material over its surface, then acting the collaborating cylinders in a diagonal position and in turn, the ceramic cylinders which act in collaboration with an interlocking cylinder located over a part, in turn equidistant.

DESCRIPTION OF THE DRAWINGS

[0010] To complete the description being made and to contribute to a better understanding of the features of the invention, two sheets of plans are attached to this specification, in which, with an illustrative and nonlimiting character, the following is shown:

Figure 1 shows a side elevational view of a conventional flexographic printer requiring a plurality of operations for cleaning and maintenance thereof.

Figure 2 corresponds to a side elevational view of the improved flexographic printer, object of the invention.

Figures 3, 4, 5 and 6 correspond to a view of the different times performed in the machine shown in figure 2, for printing over corrugated cardboard.

PREFERRED EMBODIMENT OF THE INVENTION

[0011] In view of these figures, it can be seen how the improved flexographic printer (10) is formed as from a structure, chassis or similar (11), upon which a printing cylinder (12) is installed and upon which is attached a stencil (20), having in diagonal sense in the upper part and left side, two rollers (15) with different diameters collaborating for the passage of cardboard or the like (30), having in the lower part three rollers (14) positioned equidistantly over a part (17) which acts as a centre of rotation for the three ceramic or anilox cylinders, there being an ink chamber (18) with a double squeegee and of a shiftable nature collaborating in the incorporation of the ink on said cylinders (14).

[0012] The invention has an interlocking cylinder (16) acting in direct collaboration with the cylinders (14) and the centre of rotation (17) located in the central area of the support part, it being necessary to mention that roller (12) rotation generates the impression on the corrugated cardboard or the like (30) in collaboration with the rollers (14).

Claims

1. An improved flexographic printer, of the type designed as from a structure, chassis or frame (11) upon which a printing cylinder (12) is incorporated which, in its upper part and left side, has rollers (15) positioned diagonally with a different diameter, less in diameter than that of the cylinder (12) upon which

the stencil (20) is coupled, which generates the impression on corrugated cardboard or the like (30), the lower part of the cylinder (12) having a support part upon which three ceramic or anilox cylinders (14) are found, positioned equidistantly and supported by a centre of rotation (17), in the lower part incorporating an interlocking cylinder (16) and having an ink chamber (18) with a double shiftable squeegee.

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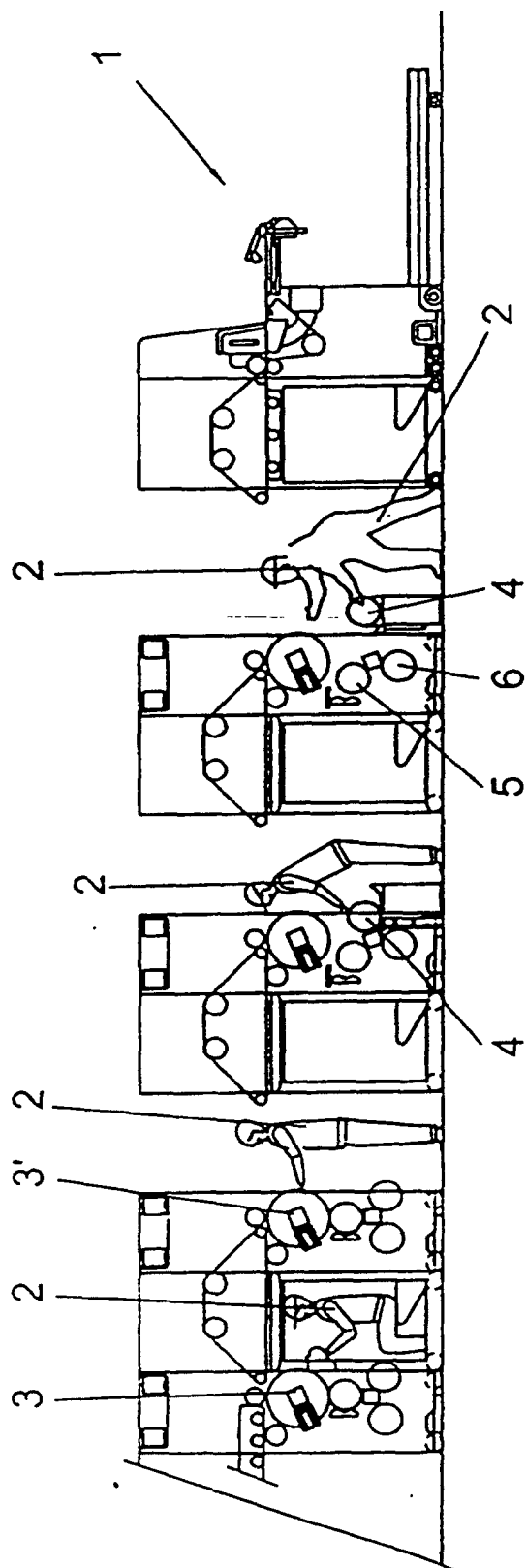


FIG. 1

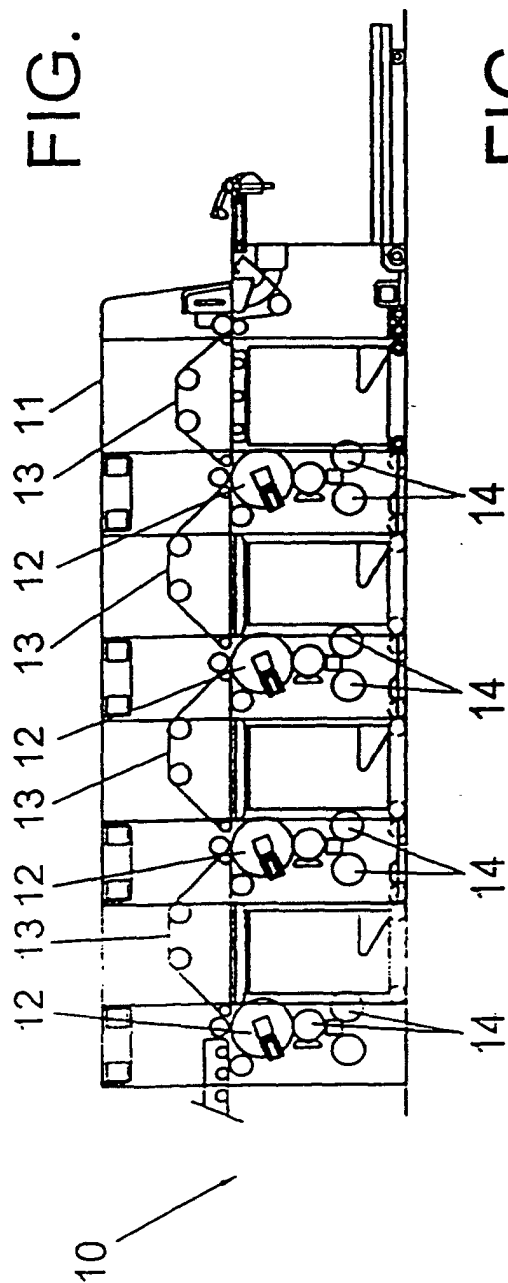


FIG. 2

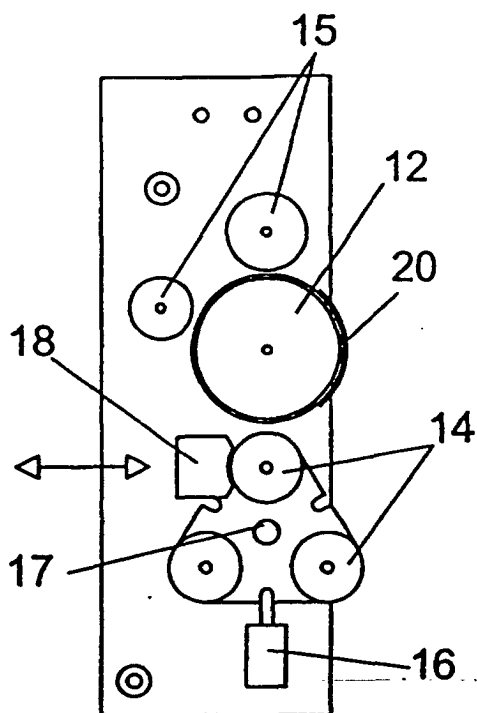


FIG. 3

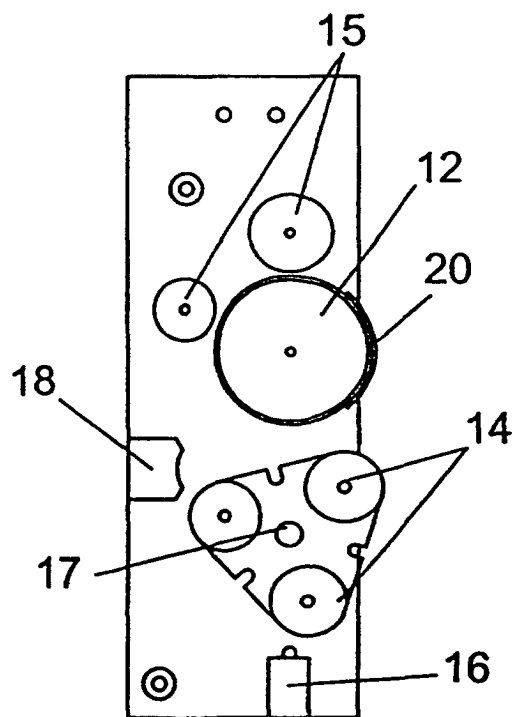


FIG. 4

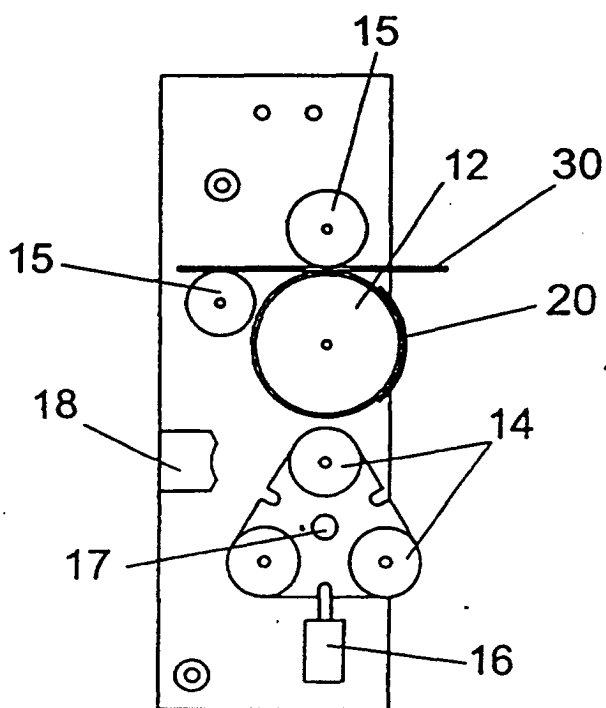


FIG. 5

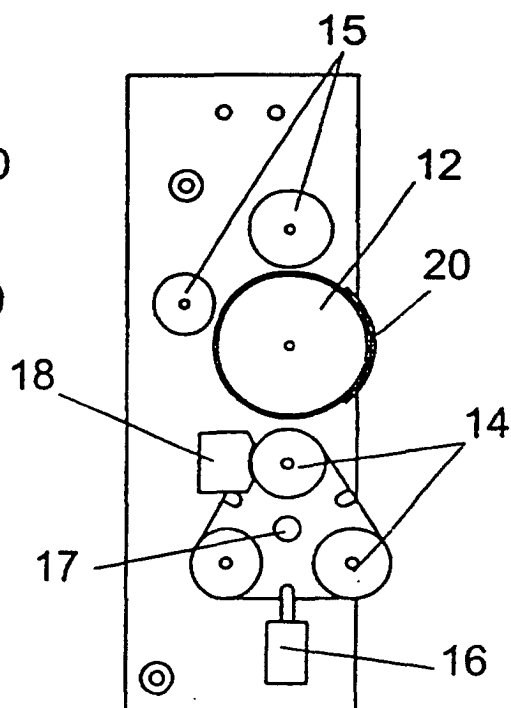


FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES02/00189

A. CLASSIFICATION OF SUBJECT MATTER		
CIP ⁷ B 41 F 5/24		
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)		
CIP ⁷ B 41 F+		
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)		
CIBEPAT, EPODOC, WPI, PAJ		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0468655 A1 (WARD HOLDING COMPANY), 29.01.1992, column 4, line 15-column 6, line 28, figures.	1
A	US 4244292 A (WILLIAMS et al.), 13.01.1981, column 2, line 8-column 4, line 7, figures	1
A	EP 0884175 A2 (AURELIA OFFSETT S.p.A.), 16.12.1998, column 2, line 22- column 3, line 31, figures	1
A	EP 0739730 A2 (MITSUBISHI JUKOGYO KABUSHIKI KAISHA), 30.10.1996, the whole document	1
A	EP 0481801 A1 (SIMON CONTAINER MACHINERY), 22.04.1992, the whole document	1
A	FR 1535541 A (WINDMÖLER & HÖLSCHER), 01.07.1968, the whole document	1
☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "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 "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "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 "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 "&" document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
20.08.2002 20.08.2002		23.AUG.2002 (23.08.2002)
Name and mailing address of the ISA/ O.E.P.M. C/Panamá 1, 28071 Madrid, España. n° de fax +34 91 3495304		Authorized officer Gloria Villarreal Alvaro n° de teléfono +34 91 349 53 85
Facsimile No.		Telephone No.

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Information on patent family members

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