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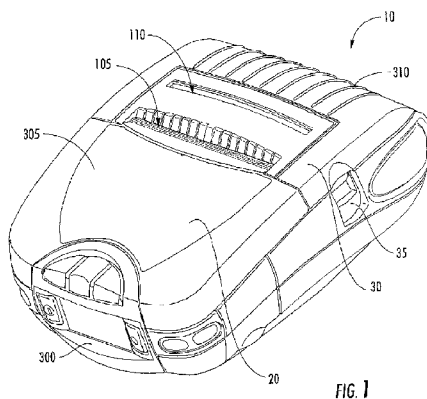
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(54) Title: PORTABLE PRINTER



(57) Abstract: Devices, systems and methods for a portable printer (10) are provided. Personnel utilize features of the printer to manage products, store information on labels, and aid in shipping. A low battery shut-off feature shuts down the printer at a set battery power percentage; a battery charge control feature controls battery charging to stay within a set range of state of charge values to ensure longer battery life,- a ribbon cartridge insertion feature allows for easy replacement of the ribbon cartridge (52); ribbon cartridge locating features lock the ribbon cartridge into place for printing; a ribbon guiding feature adjusts the ribbon (55) during printing to reduce wrinkles; an RFID coupler mounting feature mounts and shields an RFID coupler (60) inside the printer; a media guide locking feature fixes the media position to prevent misalignment; and a media alignment feature allows the user to properly align the media with the printhead during installation.



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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/047898

A. CLASSIFICATION OF SUBJECT MATTER INV. B41J17/32		
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) B41J		
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 practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 829 696 A (SONY CORP [JP]) 5 September 2007 (2007-09-05) column 59, line 47 - column 62, line 27; figure 40 paragraph [0227]	1,2,4-7, 11,15
X	US 4 632 585 A (OYAMATSU YASUYUKI [JP] ET AL) 30 December 1986 (1986-12-30) column 4, line 63 - column 5, line 15; figure 6	1,2,4-7, 11,15
X	US 2005/271449 A1 (HIRTE MARK [US] ET AL) 8 December 2005 (2005-12-08) paragraphs [0028], [0029]; figure 2	1
A	US 5 921 688 A (FURUYA YOSHIKIYO [JP] ET AL) 13 July 1999 (1999-07-13) column 15, line 66 - column 16, line 17; figure 13	1
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 <p style="text-align: center;">24 September 2009</p>		Date of mailing of the international search report <p style="text-align: center;">26/01/2010</p>
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer <p style="text-align: center;">Joosting, Thetmar</p>

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/047898

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-15

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-15

A printer with a housing for a ribbon and a ribbon cover and a cartridge retaining feature to engage the ribbon cartridge. The cartridge is moved to an installed position when the cover is closed and to an accessible position when the cover is open.

2. claims: 16-20

A printing mechanism having a platen and a printhead on a printhead support ,which has a pocket to receive an RFID coupler

3. claims: 21-28

A printer comprising a housing for ribbon cartridge and a printhead support that defines channels on opposite sides of the printhead (not part of the claim...) wherein each of the channels receives part of the cartridge frame

4. claims: 29-32

Printer for media (without core) comprising two media support arms (at least one being biased to support), defining a locking element, When the media cover (with a second locking element) is closed ,the two locking elements engage.

5. claims: 33-41

Printer with a media cover and a ribbon cover, one of the two has a slidable opening mechanism (slides)

6. claims: 42-45

ribbon cartridge comprising supply and take up spool and a cartridge frame comprising a retrieval assist angle in the frame with a gripping portion

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2009/047898

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
EP 1829696	A	05-09-2007	CN 101028771 A	05-09-2007
			JP 2007230155 A	13-09-2007
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