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[Continued on next page]

(54) Title: SAMPLE IDENTIFICATION SYSTEM HAVING PLURAL READERS

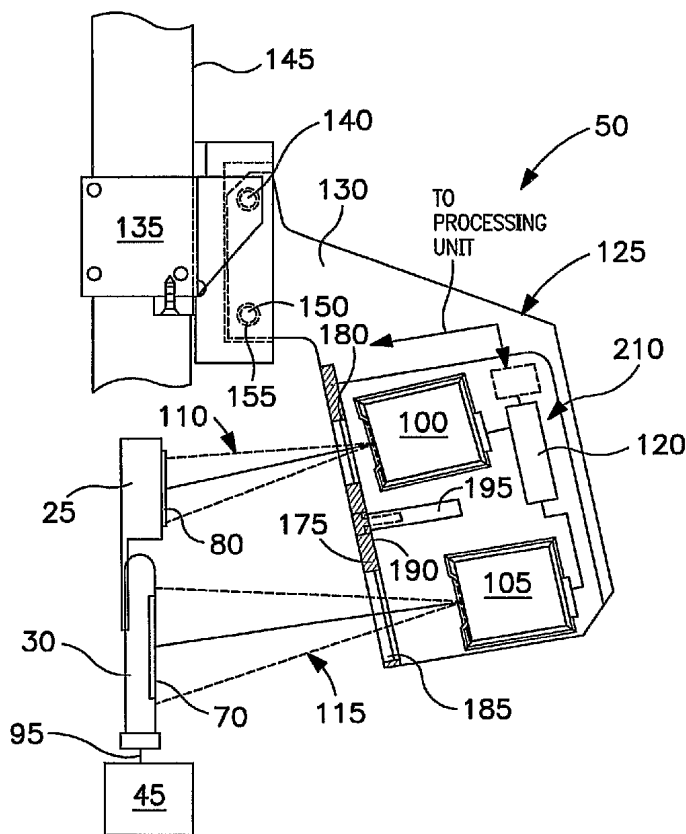


FIG. 4

(57) Abstract: A sample identification system that may be used to track and correlate a sample container in a laboratory analyzer or the like is set forth. The exemplary laboratory analyzer employs at least one carrier that supports at least one sample tube. The sample identification system includes a first optical reader that has a first field of view that is sufficient to expose the first optical reader to targeted visual indicia that identifies the carrier. The system further includes a second optical reader that has a second field of view that is sufficient to expose the second optical reader to targeted visual indicia identifying the sample tube held by the carrier. One or more decoders may be used to extract the identification information from the targeted visual indicia. The identification information then may be provided to a process controller, which may use the information for one or more predetermined purposes. One such purpose may be to use the identification information derived from the first and second readers to direct manipulation of the content of the sample tube. In various embodiments, the system may employ one or more masks to enhance the accuracy of the identification process. Further, the system may be adapted to replace a legacy identification system of an existing apparatus.

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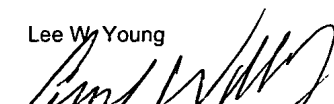
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B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC(8): G01N 21/00 (2007.01) USPC: 422/82.05 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC: 422/67, 82.05, 102; 436/43 search terms below Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WEST (USPT,USOC,EPAB,JPAB; PLUR) and Google Patents (http://www.google.com/patents) search terms: "process controller", "sample tube", barcode, biological, camera, carrier, first, holding, mask, optical, reader, sample, second, system		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,439,645 A (SARALEUGI ET AL.) 8 August 1995 (08.08.1995): col 10, ln 9-10; col 16, ln 4-5; col 4, ln 13-14; col 8,ln 29-30	1-32
Y	US 6,599,476 B1 (WATSON ET AL.) 29 July 2003 (20.07.2003): col 16, ln 62; col 11, ln 8; col 16, ln 66-67; col 17,ln 10-11; col 16, ln 56; col 15, ln 47; col 4, ln 34; col 9, ln 57; col 18, ln 63-64; col 16, ln 51-53	1-32
Y	US 6,832,729 B1 (PERRY ET AL.) 21 December 2004 (21.12.2004): col 11, ln 6; col 12,ln 12	2, 10, 29
Y	US 5,128,105 A (BERTHOLD ET AL.) 7 July 1992 (07.07.1992): col 7, ln 49; col 11, ln 8; col 11, ln 35-40	16-23, 25-29, 30-32
Y	US 6,458,547 B1 (BRYAN ET AL.) 1 October 2002 (01.10.2002): col 18, ln 28; col 43, ln 12-16	14-15, 23-24
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201		Authorized officer: Lee W. Young  PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774