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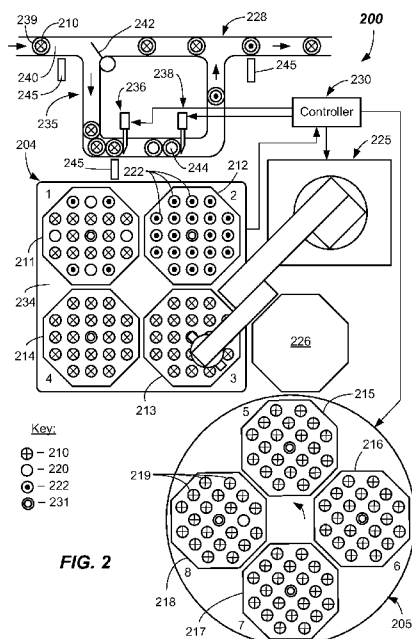
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[Continued on next page]

(54) Title: CENTRIFUGE LOADING APPARATUS, SYSTEMS, AND METHODS



(57) Abstract: Disclosed is a loading apparatus and system adapted to load unprocessed sample containers in a centrifuge and provide improved balance thereof. The apparatus has a staging platform containing at least two bucket inserts, a weight scale operable to determine a combined weight of each of the bucket inserts, a centrifuge configured to receive the bucket inserts as pairs, a robot operable to insert an unprocessed sample container into the bucket inserts, and a controller operable to command the robot to carry out placement of the unprocessed sample container into a highest priority empty receptacle of a lowest combined weight bucket insert. Methods of operating the system are provided, as are other aspects.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G01N 35/02 (2014.01)

USPC - 422/67

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)

IPC(8) - G01N 35/00, 35/02, 35/04 (2014.01)

USPC - 422/all, 63, 65, 67, 436/all, 45, 47, 494/all, 1, 42

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - G01N 35/00, 35/02, 35/04 (2014.02)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Orbit, Google Patents, Google Scholar,

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2012/090795 A1 (YAGI et al) 05 July 2012 (05.07.2012) see machine translation	1-10, 12-20

Y		11
Y	Applicant's Admitted Prior Art	11
A	US 6,060,022 A (PANG et al) 09 May 2000 (09.05.2000) entire document	1-20
A	US 2011/0045958 A1 (PEDRAZZINI) 24 February 2011 (24.02.2011) entire document	1-20
A	US 7,025,714 B2 (ESCAL) 11 April 2006 (11.04.2006) entire document	1-20

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
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"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)	"&" document member of the same patent family
"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	

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