Title: AUTOMATED SMALL ITEM DISPENSE MODULE

Abstract: A small item dispense module. Small items are stored inside a first chamber. The small items are then transferred to a second chamber having a first singulator. The first singulator transfers the small items to a third chamber having a second singulator. The second singulator transfers the small items from the third chamber to a discharge tube having a discharge gate. The discharge gate allows for the dispensing of the small items so that they easily accessible. Preferably, the dispense module further includes: a microcontroller with real-time clock, a unique electronic identification number, an external barcode identification label, and an automatic locking mechanism that can be released electronically and controlled by the microcontroller. The microcontroller also preferably keeps track of dispense and fill requests and inventory. In a preferred embodiment, the small items being dispensed are pills.
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,
RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC: B65G 59/00(2006.01); B65H 3/00(2006.01); G07F 11/16(2006.01); B65G 17/46(2006.01); B65G 29/00(2006.01); B65G 37/00(2006.01); B65G 47/00(2006.01)

USPC: 221/265.211,7; 198/471.1

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)
U.S. : 221/265.211,7; 198/471.1

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<tr>
<td>Y</td>
<td>US 3,785,523 (HANDELAND) 15 JANUARY 1974 (15.01.1974), WHOLE DOCUMENT</td>
<td>1-4, 11 AND 19-22</td>
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<tr>
<td>Y</td>
<td>US 6,561,377 (PEARSON ET. AL.) 13 MAY 2003 (13.05.2003), WHOLE DOCUMENT</td>
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<td>US 4,697,721 B1 (JOHNSON) 6 OCTOBER 1987 (06.10.1987), WHOLE DOCUMENT</td>
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Date of the actual completion of the international search: 12 SEP 2008 (12.09.2008)

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