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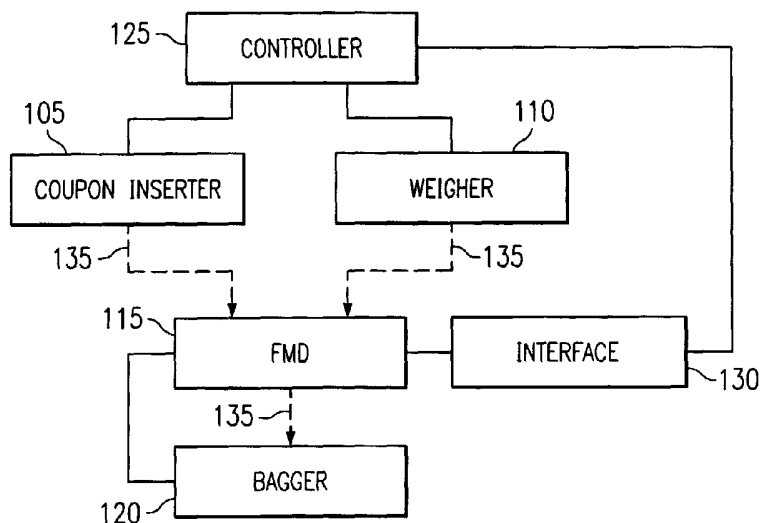
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**Declarations under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR DETECTING UNIQUE ITEMS DURING INSERTION INTO A PRODUCT PACKAGING SYSTEM



(57) Abstract: A novel method and apparatus of detecting unique items (510) as they are inserted into a product packaging system that is easily adaptable to current product packaging and prize insertion systems. A number of different types of sensors (245) may be used in conjunction with the insertion device to detect the unique prize before it is inserted into a product packaging system. Ideally, the type sensor used will detect a feature of the unique item that is easily distinguishable from other items being inserted. Once the sensor detects the prize and generates a signal, this signal can be used to perform a variety of useful functions. After detecting the unique prize, the controller (125) for the insertion device shuts down the FMD (115) for a pre-determined period of time to allow the unique prize to pass through without triggering the FMD. The controller may also increase a counter each time one of the unique prizes is detected to keep track of the number of unique prizes inserted. Once the unique prize passes through, the FMD is turned back on so that foreign objects may again be detected.



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— *of inventorship (Rule 4.17(iv)) for US only*

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

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10 July 2003

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/32752

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : B65B 1/30, 57/00, 57/14, 57/20  
 US CL : 53/493

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. : 53/493, 284.3, 460, 473, 569

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**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,941,053 A (Kotsiopoulos) 24 August 1999 (24.08.1999), see the entire reference.	1-3, 7-9, 24, 26, 32
A	US 4,678,994 A (Davies) 07 July 1987 (07.07.1987), see the entire reference.	1-9, 24-32
A	US 5,444,526 A (Echapare Ibarrola et al.) 22 August 1995 (22.08.1995), see the entire reference.	1-9, 24-32
A	US 5,785,224 A (Nowakowski) 28 July 1998 (28.07.1998), see the entire reference.	1-9, 24-32

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	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/32752

## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

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

1.  Claim Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claim 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.  Claim Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:  
Please See Continuation 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 fee, this Authority did not invite payment of any additional fee.
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.: 1-9, 24-32

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

**BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING**

The inventions listed as Groups I to V do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The above mentioned Groups I-V, lack the corresponding technical features from each other as follows:

Group I has special technical feature of an insertion device for inserting the plurality of objects into the packaging system.

Group II has special technical feature of a controller connected to a sensor for sending the different signals.

Group III has special technical feature of a packaging device positioned down stream from the insertion device for packaging the unique object.

Group IV has special technical feature of sensing for a random prize to be inserted into the packaging system.

Group V has special technical feature of computer program, which executes four instructions.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claim(s) 1-9 and 24-32, drawn to method and apparatus for identifying/detecting a unique object among a plurality of objects.

Group II, claim(s) 10-16, drawn to an apparatus for inserting a unique object into a packaging system.

Group III, claim(s) 17-23, drawn to a packaging system for packaging an object.

Group IV, claim(s) 33-39, drawn to a method of tracking a number of random prizes inserted into a packaging system.

Group V, claim(s) 40-41, drawn to a computer program product.