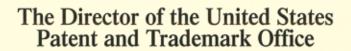
# The United States of America

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Has received an application for a patent for a new, original, and ornamental design for an article of manufacture. The title and description of the design are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the design shall be granted under the law.

Therefore, this

## **United States Patent**

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the design throughout the United States of America or importing the design into the United States of America for the term of fourteen years from the date of grant of this patent, subject to any disclaimer under 35 U.S.C. 253.

David J. Kappas

Director of the United States Patent and Trademark Office



US008499719B2

# (12) United States Patent

Brocca et al.

# (10) Patent No.: US 8,499,719 B2

(45) **Date of Patent:** Aug. 6, 2013

(54)	AUTOMATED SYSTEM FOR CONTROLLED
	DISTRIBUTION OF SUBSTANCES TO
	ANIMAL CONTAINMENT DEVICES IN AN
	ANIMAL HOUSING FACILITY

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- (\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 379 days.
- (21) Appl. No.: 12/815,995
- (22) Filed: Jun. 15, 2010
- (65) Prior Publication Data

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### (30) Foreign Application Priority Data

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(51) Int. Cl. A01K 5/02

(2006.01)

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USPC ...... 119/57.92; 119/72.5; 119/457

119/420, 421, 457; 222/650; 141/83, 192 See application file for complete search history.

### (56) References Cited

### U.S. PATENT DOCUMENTS

3,022,767	Α		2/1962	Malek		
3,074,375	Α	*	1/1963	Finkel	 119/417	

3,664,302	A	*	5/1972	Wienert 119/457
3,840,131	Α	*	10/1974	Castaldi 414/281
4,248,563	Α	*	2/1981	Fur 414/280
4,450,668	Α	*	5/1984	Grossi 53/176
4,546,901	A	*	10/1985	Buttarazzi 221/10
4,756,657	Α	*	7/1988	Kinney 414/281
4,811,675	Α	*	3/1989	Segalla 119/57.6
4,812,629	Α	*	3/1989	O'Neil et al 235/383
5,139,384	A	*	8/1992	Tuttobene 414/281
5,499,707	Α	*	3/1996	Steury 194/217
6,280,135	BI	*	8/2001	Cunningham 414/280
6,597,970	B1	*	7/2003	Steury et al 700/242
7,320,294	B2	*	1/2008	Irwin et al 119/455
7,882,680	B2	*	2/2011	Siegel et al 53/55
8,219,243	B2	*	7/2012	Haas 700/216

### FOREIGN PATENT DOCUMENTS

CA	1237348	5/1988
DE	102006053194	5/2008
EP	0677245	10/1995
FR	2844145	3/2004
JP	4121129	4/1992
WO	2008097080	8/2008
WO	2009072982	6/2009

<sup>\*</sup> cited by examiner

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### (57) ABSTRACT

An automated system for the distribution of substances to animal containment devices in an animal housing facility. The present invention also relates to a dosing device of substances, such as solid or liquid feed, which is part of said system, and to the method for dispensing feed implemented by said system. Furthermore, the present invention also relates to a method for automated dispensing of substances to animal containment devices in an animal housing facility.

### 8 Claims, 9 Drawing Sheets

