(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 2 390 849 A3

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
29.02.2012 Bulletin 2012/09

(43) Date of publication A2:
30.11.2011 Bulletin 2011/48

(21) Application number: **11178787.5**

(22) Date of filing: **12.05.2008**

(51) Int Cl.:
G07F 7/00 *(2006.01)* ***G07F 11/04*** *(2006.01)*

(84) Designated Contracting States:
DE IT

(30) Priority: **16.05.2007 JP 2007130300**

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
11175385.1 / 2 383 708
08156050.0 / 1 993 078

(71) Applicant: **Sanden Corporation**
Isesaki-shi,
Gunma 372-8502 (JP)

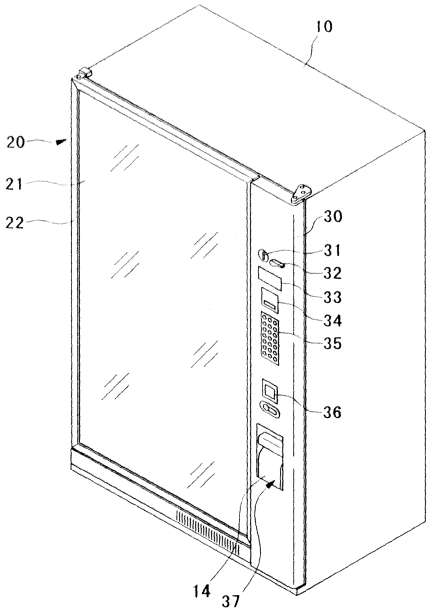
(72) Inventors:
- **Tsunoda, Masaru**
  Isesaki-shi, Gunma 372-8502 (JP)
- **Onda, Takeshi**
  Isesaki-shi, Gunma 372-8502 (JP)
- **Kurihara, Toshihiko**
  Isesaki-shi, Gunma 372-8502 (JP)
- **Yanagisawa, Yuuki**
  Isesaki-shi, Gunma 372-8502 (JP)
- **Watanabe, Yoshitaka**
  Isesaki-shi, Gunma 372-8502 (JP)

(74) Representative: **Haley, Stephen**
Gill Jennings & Every LLP
The Broadgate Tower
20 Primrose Street
London EC2A 2ES (GB)

(54) Commodity carrying out device

(57) The present invention provides a commodity carrying out device that can reliably carry out a vertically-long shaped commodity in an upright state from a commodity storage column to a bucket. More specifically, since a commodity positioned at the front end side of a commodity storage column is tilted forward to be moved into a bucket, when moving a vertically-long shaped commodity in an upright state into a bucket, it is possible to move the commodity without the commodity toppling backwards. Thus, the commodity can be reliably moved into the bucket.

Fig. 1



EP 2 390 849 A3

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 11 17 8787

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	WO 02/35484 A (JYPA AUTOMAATIO OY [FI]; SANTALA PAULI [FI]) 2 May 2002 (2002-05-02) * page 11 - page 14 *	1-8	INV. G07F7/00 G07F11/04
A	JP 2000 076535 A (TOKYO SHIBAURA ELECTRIC CO) 14 March 2000 (2000-03-14) * abstract *	1	
A	JP 9 305852 A (MATSUSHITA REFRIGERATION) 28 November 1997 (1997-11-28) * abstract *	1	
A	FR 2 718 624 A (BLANC ROGER [FR]; KESSLER JEAN) 20 October 1995 (1995-10-20) * page 5 - page 6 *	1	
A	WO 2006/100115 A (NUOVA VDE INTERNAT S R L [IT]; VICENTIN GIOVANNI [IT]) 28 September 2006 (2006-09-28) * page 6, line 24 - page 9, line 6 *	1	TECHNICAL FIELDS SEARCHED (IPC)
A	WO 2006/057821 A (SCRIPTPRO LLC [US]; GUERRA LAWRENCE E [US]) 1 June 2006 (2006-06-01) * the whole document *	1	G07F
A	JP 2000 113311 A (SANYO ELECTRIC CO) 21 April 2000 (2000-04-21) * abstract *	1	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	18 January 2012	Lavin Liermo, Jesus

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 11 17 8787

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

18-01-2012

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0235484 A	02-05-2002	AU 1237402 A	06-05-2002
		EP 1337983 A1	27-08-2003
		WO 0235484 A1	02-05-2002
JP 2000076535 A	14-03-2000	NONE	
JP 9305852 A	28-11-1997	JP 3159648 B2	23-04-2001
		JP 9305852 A	28-11-1997
FR 2718624 A	20-10-1995	----------	
WO 2006100115 A	28-09-2006	EP 1866877 A1	19-12-2007
		US 2008073373 A1	27-03-2008
		WO 2006100115 A1	28-09-2006
WO 2006057821 A	01-06-2006	AU 2005309909 A1	01-06-2006
		CA 2587433 A1	01-06-2006
		CA 2732076 A1	01-06-2006
		EP 1824771 A2	29-08-2007
		JP 2008520449 A	19-06-2008
		US 2006182609 A1	17-08-2006
		US 2006287771 A1	21-12-2006
		WO 2006057821 A2	01-06-2006
JP 2000113311 A	21-04-2000	JP 3524777 B2	10-05-2004
		JP 2000113311 A	21-04-2000

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82