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(54) Title: LINEARLY EXTENDABLE COLLECTION MECHANISM FOR REFUSE HAULING VEHICLES

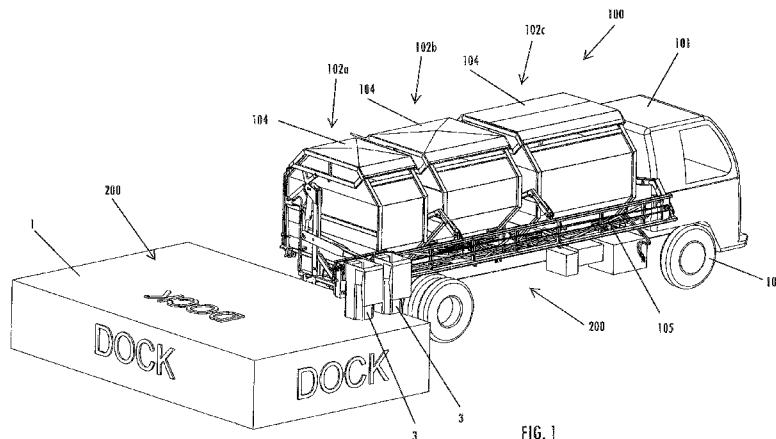
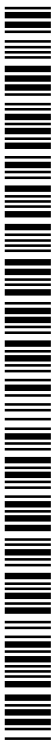


FIG. 1

(57) Abstract: An improved recyclables collection vehicle includes a lift mechanism for selective loading into any one of multiple hoppers on the vehicle. The lift mechanism includes a track which extends past the rear of the vehicle such that a moveable carriage may move along the track to collect a refuse bin located to the rear of the vehicle or on an elevated dock behind or alongside the vehicle. The carriage can be aligned with any one of the hoppers such that the lift mechanism will elevate the refuse bin and invert it over the hopper container. The movement of the carriage along the track and the raising of the lift mechanism are operated with a wireless remote control.



INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/028045**A. CLASSIFICATION OF SUBJECT MATTER***B65F 3/02(2006.01)i, B65F 3/04(2006.01)i, B65F 3/08(2006.01)i*

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)

B65F 3/02; B65F 3/20; B65F 3/00; B65F 3/04; B02C 18/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: track, hopper

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5071307 A (CARSON) 10 December 1991 See the whole document.	1-13
A	US 6474928 B1 (CHRISTENSON) 05 November 2002 See the whole document.	1-13
A	JP 7-56242 Y2 (SHINMAYWA INDUSTRIES LTD.) 25 December 1995 See the whole document.	14-17
A	JP 9-58805 A (FUJI CAR MFG. CO., LTD.) 04 March 1997 See the whole document.	14-17

 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

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"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

"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

"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

"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

"&" document member of the same patent family

Date of the actual completion of the international search

20 NOVEMBER 2012 (20.11.2012)

Date of mailing of the international search report

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Name and mailing address of the ISA/KR

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2012/028045**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

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

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims 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. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Group I, claims 1-13 are directed to a track and a carriage.

Group II, claims 14-17 are directed to a hopper and a loading apparatus.

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.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/028045

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5071307 A	10.12.1991	US 05018929 A	28.05.1991
US 6474928 B1	05.11.2002	None	
JP 7-56242 Y2	25.12.1995	JP 4-058504 U	20.05.1992
JP 9-58805 A	04.03.1997	JP 2935228 B2	16.08.1999