



US009510721B2

(12) **United States Patent**
Pedlar et al.

(10) **Patent No.:** **US 9,510,721 B2**
(45) **Date of Patent:** ***Dec. 6, 2016**

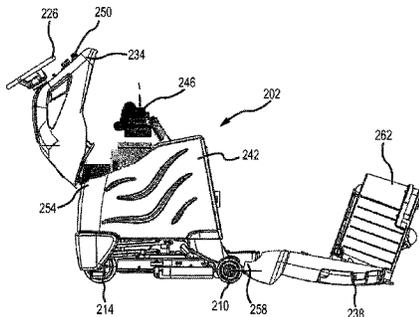
- (54) **FLOOR CLEANING APPARATUS**
- (71) Applicant: **Karcher North America, Inc.**, Denver, CO (US)
- (72) Inventors: **Roger Pedlar**, Lakewood, CO (US); **Daniel Pearson**, Littleton, CO (US); **Eric L. Shark**, Littleton, CO (US); **Daniel C. Venard**, Centennial, CO (US); **Brian J. Doll**, Denver, CO (US); **Rusty Simmons**, Englewood, CO (US); **Nevin Green**, Highlands Ranch, CO (US); **Loi X. Tran**, Highlands Ranch, CO (US); **Robert S. Gorsky**, Highlands Ranch, CO (US); **Steven W. Tucker**, Centennial, CO (US); **Todd Leifheit**, Littleton, CO (US)
- (73) Assignee: **Karcher North America, Inc.**, Denver, CO (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

- (21) Appl. No.: **14/938,699**
- (22) Filed: **Nov. 11, 2015**
- (65) **Prior Publication Data**
US 2016/0095489 A1 Apr. 7, 2016

Related U.S. Application Data

- (63) Continuation of application No. 14/504,263, filed on Oct. 1, 2014, now Pat. No. 9,192,276, which is a (Continued)
- (51) **Int. Cl.**
A47L 11/03 (2006.01)
A47L 11/16 (2006.01)
(Continued)



- (52) **U.S. Cl.**
CPC **A47L 11/4066** (2013.01); **A47L 11/24** (2013.01); **A47L 11/4027** (2013.01); **A47L 11/4041** (2013.01); **A47L 11/4044** (2013.01)
- (58) **Field of Classification Search**
CPC **A47L 11/03**; **A47L 11/16**; **A47L 11/24**; **A47L 11/4027**; **A47L 11/4041**; **A47L 11/4044**; **A47L 11/4066**
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 1,268,963 A 6/1918 Gray
- 1,596,041 A 8/1926 Young
(Continued)

FOREIGN PATENT DOCUMENTS

- AT 0231900 2/1964
- AU 226251 6/1959
(Continued)

OTHER PUBLICATIONS

Notice of Allowance for U.S. Appl. No. 14/643,768 mailed Jun. 22, 2016, 7 pages.
(Continued)

Primary Examiner — Randall Chin
(74) *Attorney, Agent, or Firm* — Sheridan Ross P.C.

(57) **ABSTRACT**

A floor treatment apparatus is provided that includes a chassis that supports at least one cleaning element. The chassis is supported by a plurality of wheels, one which is steerable via a steering wheel interconnected to a housing also associated with the chassis. The chassis provided includes a plurality of movable housing members, one of which is associated with the steering wheel. To access the internal components of the floor treatment apparatus, the front housing is rotated or moved away from the other
(Continued)

