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(54) **BROOM ASSEMBLY FOR SWEEPING MACHINE AND METHOD OF OPERATION**

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E01H 1/05 (2006.01)

(52) **U.S. Cl.**
USPC **15/82; 15/78**

(58) **Field of Classification Search**
USPC 15/52.1, 78, 82; 299/36.1; 404/83
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,548,676 A 4/1951 Milz et al.
2,711,551 A 6/1955 Wagner et al.

3,071,793 A 1/1963 Le Grand
3,649,985 A 3/1972 Hunt
4,678,365 A 7/1987 Ban et al.
5,560,065 A * 10/1996 Young 15/82
6,622,336 B2 * 9/2003 Jackson 15/82
6,672,675 B1 * 1/2004 Swain 299/36.1
6,981,820 B2 1/2006 Nelson
RE38,973 E 2/2006 Smith
7,651,295 B2 1/2010 Eppes et al.
7,793,376 B2 9/2010 Rush, Sr. et al.
2011/0209886 A1 9/2011 Gendelman et al.

* cited by examiner

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(57) **ABSTRACT**

A broom assembly for attachment to a vehicle is adapted to rotate a brush having a tubular core. The broom assembly includes a center section, a left side plate, a right side plate, an idle hub on one of the side plates and a drive hub on the other of the side plates. These hubs define a core axis about which the brush is rotated. A first linear actuator is adapted to move the left side plate along an axis that is parallel to the core axis between a left open position and a left closed position, and a second linear actuator is adapted to move the right side plate along an axis that is parallel to the core axis between a right open position and a right closed position. The broom assembly may be operated in a work mode and a maintenance mode.

13 Claims, 6 Drawing Sheets

