



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
28.06.2006 Bulletin 2006/26

(51) Int Cl.:
A46B 7/06^(2006.01) A46B 7/02^(2006.01)
A47L 13/24^(2006.01)

(43) Date of publication A2:
21.09.2005 Bulletin 2005/38

(21) Application number: **05005996.3**

(22) Date of filing: **18.03.2005**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR**
Designated Extension States:
AL BA HR LV MK YU

(72) Inventors:
• **Saunders, Craig M.
Rocky River
Ohio 44116 (US)**
• **Kalman, Jeffrey R.
Cleveland Heights
Ohio 44118 (US)**

(30) Priority: **18.03.2004 US 554118 P**
11.01.2005 US 32933

(74) Representative: **Müller-Boré & Partner
Patentanwälte
Grafinger Strasse 2
81671 München (DE)**

(71) Applicant: **G&S Metal Products Company, Inc.
Cleveland OH 44127 (US)**

(54) **Corner broom**

(57) A brush head includes a frame and an assembly of brush sections connected thereto. The assembly of brush sections includes first and second wing brushes and a central brush therebetween. The first wing brush is pivotally interconnected to the frame at a first hinge,

and the second wing brush is pivotally interconnected to the frame at a second hinge. The wing brushes move from a first, rest orientation, angled with one another when at rest or lightly loaded; to a second, load orientation, parallel and colinear with one another when loaded.

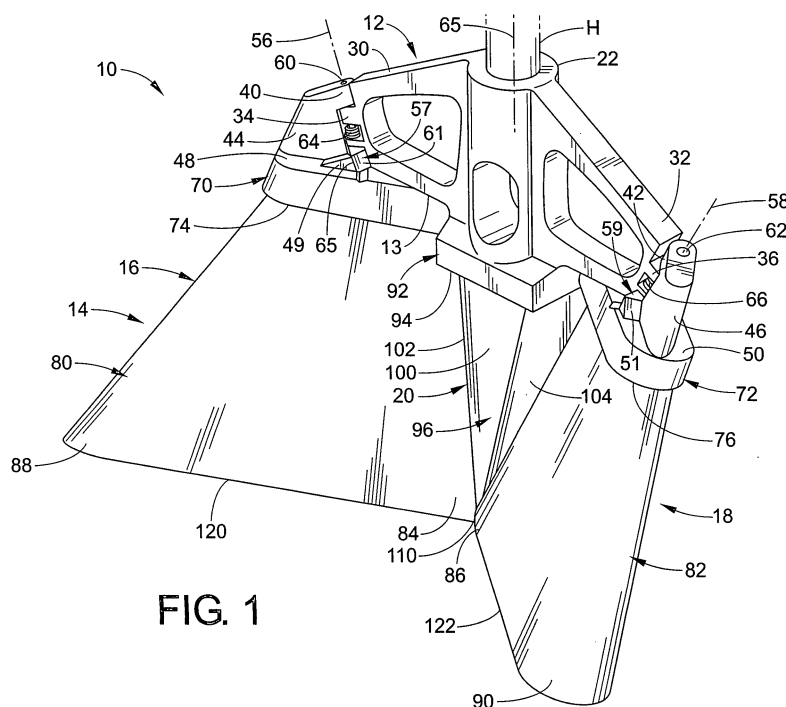


FIG. 1



| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
|---|--|---|---|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (IPC) |
| X | DE 35 44 496 A1 (GABRYS,OSWALD; GABRYS, OSWALD, 4280 BORKEN, DE) 24 July 1986 (1986-07-24) * figures 3,4 * * springs 14 * | 1,10-18, 21,23 | INV. A46B7/06 A46B7/02 A47L13/24 |
| X | EP 0 412 060 A (F.I.M.M. DI SPINELLI ING. ENRICO & C. S.A.S) 6 February 1991 (1991-02-06) * claim 1; figures * | 1-4,10 | |
| X | US 5 500 970 A (MAURER ET AL) 26 March 1996 (1996-03-26) * claim 1; figure 2 * | 1,5-10, 18-20, 22,24-26 | |
| A | US 2003/154568 A1 (BOLAND BERNHARD ET AL) 21 August 2003 (2003-08-21) * claims; figures * | 14-16 | |
| | | | TECHNICAL FIELDS SEARCHED (IPC) |
| | | | A46B A47L |
| The present search report has been drawn up for all claims | | | |
| Place of search | | Date of completion of the search | Examiner |
| The Hague | | 3 May 2006 | Claudel, B |
| CATEGORY OF CITED DOCUMENTS | | 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 | |
| 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 | | | |

1
EPO FORM 1503 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 05 00 5996

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.

03-05-2006

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|--|----|------------------|-------------------------|------------------|
| DE 3544496 | A1 | 24-07-1986 | NONE | |
| ----- | | | | |
| EP 0412060 | A | 06-02-1991 | IT 218364 Z2 | 05-05-1992 |
| ----- | | | | |
| US 5500970 | A | 26-03-1996 | AU 3886293 A | 18-11-1993 |
| | | | WO 9320777 A1 | 28-10-1993 |
| | | | DE 59307594 D1 | 04-12-1997 |
| | | | EP 0590119 A1 | 06-04-1994 |
| ----- | | | | |
| US 2003154568 | A1 | 21-08-2003 | AU 8588001 A | 22-03-2002 |
| | | | CN 1450881 A | 22-10-2003 |
| | | | DE 10044031 A1 | 21-03-2002 |
| | | | WO 0219942 A1 | 14-03-2002 |
| | | | EP 1315466 A1 | 04-06-2003 |
| | | | JP 2004508099 T | 18-03-2004 |
| ----- | | | | |

EPO FORM P0469

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