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(12) **United States Design Patent**
Massie et al.

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(54) **ORAL IRRIGATOR HANDLE**

FOREIGN PATENT DOCUMENTS

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CA 851479 9/1970
CH 655237 4/1986

(Continued)

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OTHER PUBLICATIONS

US RE27,274 E, 01/1972, Mattingly (withdrawn)

(Continued)

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(57) **CLAIM**

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The ornamental design for an oral irrigator handle, as shown and described.

(51) **LOC (12) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/111**

(58) **Field of Classification Search**

USPC D24/108, 111–115, 152, 176; D4/101,
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CPC A61C 17/20; A61C 17/00; A61C 17/005;
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See application file for complete search history.

DESCRIPTION

FIG. 1 is a front isometric view of an oral irrigator handle with a tip shown in dashed lines for environment.

FIG. 2 is a front elevation view of the oral irrigator handle of FIG. 1.

FIG. 3 is a rear elevation view of the oral irrigator handle of FIG. 1.

FIG. 4 is a right side elevation view of the oral irrigator handle of FIG. 1.

FIG. 5 is a left side elevation view of the oral irrigator handle of FIG. 1.

FIG. 6 is a top plan view of the oral irrigator handle of FIG. 1; and,

FIG. 7 is a bottom plan view of the oral irrigator handle FIG. 1.

The broken line showing of the tip in FIG. 1 depicts environmental structure and forms no part of the claimed design. All other broken lines depict portions of the oral irrigator handle that form no part of the claimed design.

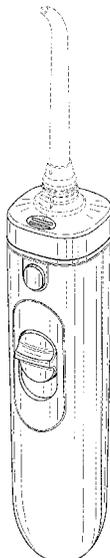
(56) **References Cited**

U.S. PATENT DOCUMENTS

| | | |
|-------------|---------|----------------|
| 555,588 A | 3/1896 | Spencer |
| 1,278,225 A | 9/1918 | Schamberg |
| 1,452,258 A | 4/1923 | Smith |
| 1,464,419 A | 8/1923 | Gill |
| 1,480,310 A | 1/1924 | Smith |
| 1,498,267 A | 6/1924 | Hachman |
| 1,602,742 A | 10/1926 | Bennet |
| 1,650,686 A | 11/1927 | Binks |
| 1,669,889 A | 5/1928 | Andrews et al. |

(Continued)

1 Claim, 4 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

| | | | | | | | |
|-----------|---|---------|----------------------|-----------|---|---------|------------------|
| 1,681,320 | A | 8/1928 | Bergl et al. | 3,718,974 | A | 3/1973 | Buchtel et al. |
| 1,933,454 | A | 10/1933 | Sidney | 3,747,595 | A | 7/1973 | Grossan |
| 1,940,111 | A | 12/1933 | Austin | 3,768,472 | A | 10/1973 | Hodosh et al. |
| D93,019 | S | 8/1934 | Hose | 3,771,186 | A | 11/1973 | Moret et al. |
| 1,977,782 | A | 10/1934 | Roy | 3,783,364 | A | 1/1974 | Gallanis et al. |
| 2,107,686 | A | 2/1938 | Bramsen et al. | 3,809,506 | A | 5/1974 | Malcosky |
| D159,872 | S | 8/1950 | Skold | 3,809,977 | A | 5/1974 | Balamuth et al. |
| 2,531,730 | A | 11/1950 | Henderson | 3,811,432 | A | 5/1974 | Moret |
| 2,595,666 | A | 5/1952 | Hutson | 3,820,532 | A | 6/1974 | Eberhardt et al. |
| 2,669,233 | A | 2/1954 | Friend | 3,827,147 | A | 8/1974 | Condon |
| 2,709,227 | A | 5/1955 | Foley et al. | 3,837,166 | A | 9/1974 | Hiraoka |
| 2,733,713 | A | 2/1956 | Kabnick | 3,840,795 | A | 10/1974 | Roszyk et al. |
| 2,783,919 | A | 3/1957 | Ansell | 3,847,145 | A | 11/1974 | Grossan |
| 2,794,437 | A | 6/1957 | Tash | 3,854,209 | A | 12/1974 | Franklin et al. |
| 2,870,932 | A | 1/1959 | Davis | 3,863,628 | A | 2/1975 | Vit |
| 2,984,452 | A | 5/1961 | Hooper | 3,871,560 | A | 3/1975 | Crippa |
| 3,089,490 | A | 5/1963 | Goldberg | 3,874,506 | A | 4/1975 | Hill et al. |
| 3,096,913 | A | 7/1963 | Jousson | 3,912,125 | A | 10/1975 | Acklin |
| 3,144,867 | A | 8/1964 | Trupp et al. | 3,943,628 | A | 3/1976 | Kronman et al. |
| D202,041 | S | 8/1965 | Burzclaff | 3,959,883 | A | 6/1976 | Walls et al. |
| 3,209,956 | A | 10/1965 | McKenzie | 3,973,558 | A | 8/1976 | Stouffer et al. |
| 3,216,619 | A | 11/1965 | Richards et al. | 3,977,084 | A | 8/1976 | Sloan |
| 3,225,759 | A | 12/1965 | Drapen et al. | 4,001,526 | A | 1/1977 | Olson |
| 3,227,158 | A | 1/1966 | Mattingly | 4,004,302 | A | 1/1977 | Hori |
| 3,266,623 | A | 8/1966 | Poferl | 4,007,739 | A | 2/1977 | Bron et al. |
| 3,297,558 | A | 1/1967 | Hillquist | 4,013,227 | A | 3/1977 | Herrera |
| D208,778 | S | 10/1967 | Koch | 4,052,002 | A | 10/1977 | Stouffer et al. |
| D209,202 | S | 11/1967 | Fulton et al. | D246,667 | S | 12/1977 | Mackay et al. |
| D209,203 | S | 11/1967 | Mattingly et al. | D246,668 | S | 12/1977 | Mackay et al. |
| D209,204 | S | 11/1967 | St. Clair et al. | 4,060,870 | A | 12/1977 | Cannarella |
| D209,395 | S | 11/1967 | Gilbert | 4,075,761 | A | 2/1978 | Behne et al. |
| D210,018 | S | 1/1968 | Mattingly et al. | 4,078,558 | A | 3/1978 | Woog et al. |
| D210,019 | S | 1/1968 | Johnson et al. | 4,094,311 | A | 6/1978 | Hudson |
| 3,370,214 | A | 2/1968 | Aymar | 4,108,167 | A | 8/1978 | Hickman et al. |
| 3,391,696 | A | 7/1968 | Woodward | 4,108,178 | A | 8/1978 | Betush |
| 3,393,673 | A | 7/1968 | Mattingly et al. | 4,109,650 | A | 8/1978 | Peclard |
| 3,400,999 | A | 9/1968 | Goldstein | 4,122,845 | A | 10/1978 | Stouffer et al. |
| 3,418,552 | A | 12/1968 | Holmes | 4,133,971 | A | 1/1979 | Boyd et al. |
| 3,420,228 | A | 1/1969 | Kalbfeld | 4,135,501 | A | 1/1979 | Leunissan |
| 3,425,410 | A | 2/1969 | Cammack | 4,141,352 | A | 2/1979 | Ebner et al. |
| 3,453,969 | A | 7/1969 | Mattingly | 4,144,646 | A | 3/1979 | Takemoto et al. |
| 3,465,751 | A | 9/1969 | Powers | 4,149,315 | A | 4/1979 | Page, Jr. et al. |
| 3,467,083 | A | 9/1969 | Mattingly | 4,154,375 | A | 5/1979 | Bippus |
| 3,467,286 | A | 9/1969 | Ostrowsky | 4,160,383 | A | 7/1979 | Rauschenberger |
| D215,920 | S | 11/1969 | McCarty et al. | 4,171,572 | A | 10/1979 | Nash |
| 3,487,828 | A | 1/1970 | Troy | 4,182,038 | A | 1/1980 | Fleer |
| 3,489,268 | A | 1/1970 | Meierhoefer | 4,200,235 | A | 4/1980 | Monschke |
| 3,495,587 | A | 2/1970 | Freedman | 4,201,200 | A | 5/1980 | Hubner |
| 3,496,933 | A | 2/1970 | Lloyd | 4,210,380 | A | 7/1980 | Brzostek |
| 3,499,440 | A | 3/1970 | Gibbs | 4,215,476 | A | 8/1980 | Armstrong |
| 3,500,824 | A | 3/1970 | Gilbert | 4,219,618 | A | 8/1980 | Leonard |
| 3,501,203 | A | 3/1970 | Falk | 4,227,878 | A | 10/1980 | Lohn |
| 3,502,072 | A | 3/1970 | Stillman | 4,229,634 | A | 10/1980 | Hickman et al. |
| 3,517,669 | A | 6/1970 | Buono et al. | 4,236,889 | A | 12/1980 | Wright |
| D218,270 | S | 8/1970 | Soper | D258,097 | S | 2/1981 | Wistrand |
| 3,522,801 | A | 8/1970 | Robinson | 4,248,589 | A | 2/1981 | Lewis |
| 3,532,221 | A | 10/1970 | Kaluhiokalani et al. | 4,249,899 | A | 2/1981 | Davis |
| 3,536,065 | A | 10/1970 | Moret | 4,257,458 | A | 3/1981 | Kondo et al. |
| 3,537,444 | A | 11/1970 | Garn | 4,262,799 | A | 4/1981 | Perrett |
| 3,538,950 | A | 11/1970 | Porteners | 4,266,934 | A | 5/1981 | Pernot |
| 3,547,110 | A | 12/1970 | Balamuth | 4,276,023 | A | 6/1981 | Phillips et al. |
| 3,561,433 | A | 2/1971 | Kovach | 4,276,880 | A | 7/1981 | Malmin |
| D220,334 | S | 3/1971 | Mackay et al. | 4,302,186 | A | 11/1981 | Cammack et al. |
| 3,570,525 | A | 3/1971 | Borsum | 4,303,064 | A | 12/1981 | Buffa |
| 3,572,375 | A | 3/1971 | Rosenberg | 4,303,070 | A | 12/1981 | Ichikawa et al. |
| 3,578,884 | A | 5/1971 | Jacobson | 4,306,862 | A | 12/1981 | Knox |
| D220,996 | S | 6/1971 | Irons | 4,315,741 | A | 2/1982 | Reichl |
| 3,583,609 | A | 6/1971 | Oppenheimer | 4,319,568 | A | 3/1982 | Tregoning |
| 3,590,813 | A | 7/1971 | Roszyk | 4,331,422 | A | 5/1982 | Heyman |
| 3,608,548 | A | 9/1971 | Lewis | 4,337,040 | A | 6/1982 | Cammack et al. |
| D222,862 | S | 1/1972 | Cook | 4,340,365 | A | 7/1982 | Pisanu |
| 3,636,947 | A | 1/1972 | Balamuth | 4,340,368 | A | 7/1982 | Lococo |
| 3,651,576 | A | 3/1972 | Massa | D266,117 | S | 9/1982 | Oberheim |
| 3,669,101 | A | 6/1972 | Kleiner | 4,353,694 | A | 10/1982 | Pelerin |
| 3,703,170 | A | 11/1972 | Ryckman, Jr. | 4,363,626 | A | 12/1982 | Schmidt et al. |
| | | | | 4,365,376 | A | 12/1982 | Oda et al. |
| | | | | 4,370,131 | A | 1/1983 | Banko |
| | | | | 4,374,354 | A | 2/1983 | Petrovic et al. |
| | | | | 4,382,167 | A | 5/1983 | Maruyama et al. |

(56)

References Cited

U.S. PATENT DOCUMENTS

| | | | | | | | |
|-----------|---|---------|--------------------|-----------|---|---------|--------------------|
| 4,382,786 | A | 5/1983 | Lohn | 4,959,199 | A | 9/1990 | Brewer |
| D270,000 | S | 8/1983 | Ketler | 4,961,698 | A | 10/1990 | Vlock |
| 4,396,011 | A | 8/1983 | Mack et al. | 4,966,551 | A | 10/1990 | Betush |
| 4,412,823 | A | 11/1983 | Sakai et al. | 4,969,874 | A | 11/1990 | Michel et al. |
| 4,416,628 | A | 11/1983 | Cammack | 4,973,246 | A | 11/1990 | Black |
| 4,442,830 | A | 4/1984 | Markau | 4,973,247 | A | 11/1990 | Varnes et al. |
| 4,442,831 | A | 4/1984 | Trenary | 4,973,250 | A | 11/1990 | Milman |
| 4,452,238 | A | 6/1984 | Kerr | 4,975,054 | A | 12/1990 | Esrock |
| 4,454,866 | A | 6/1984 | Fayen | 4,979,503 | A | 12/1990 | Chernack |
| 4,512,769 | A | 4/1985 | Kozam et al. | 4,979,504 | A | 12/1990 | Mills |
| 4,517,962 | A | 5/1985 | Heckele | 4,989,590 | A | 2/1991 | Baum et al. |
| 4,531,912 | A | 7/1985 | Schuss et al. | 4,998,880 | A | 3/1991 | Nerli |
| 4,531,913 | A | 7/1985 | Taguchi | 5,013,241 | A | 5/1991 | Von Gutfeld et al. |
| 4,534,340 | A | 8/1985 | Kerr et al. | 5,014,884 | A | 5/1991 | Wunsch |
| 4,552,130 | A | 11/1985 | Kinoshita | 5,019,054 | A | 5/1991 | Clement et al. |
| 4,561,214 | A | 12/1985 | Inoue | 5,027,798 | A | 7/1991 | Primiano |
| D283,374 | S | 4/1986 | Cheuk-Yiu | 5,029,576 | A | 7/1991 | Evans, Sr. |
| 4,585,415 | A | 4/1986 | Hommann | 5,033,617 | A | 7/1991 | Hartwein et al. |
| 4,591,777 | A | 5/1986 | McCarty et al. | 5,033,961 | A | 7/1991 | Kandler et al. |
| 4,592,728 | A | 6/1986 | Davis | D318,918 | S | 8/1991 | Hartwein |
| 4,602,906 | A | 7/1986 | Grunenfelder | 5,046,486 | A | 9/1991 | Grulke et al. |
| 4,607,627 | A | 8/1986 | Leber et al. | 5,049,071 | A | 9/1991 | Davis et al. |
| 4,613,074 | A | 9/1986 | Schulze | 5,060,825 | A | 10/1991 | Palmer et al. |
| 4,619,009 | A | 10/1986 | Rosenstatter | 5,061,180 | A | 10/1991 | Wiele |
| 4,619,612 | A | 10/1986 | Weber et al. | 5,062,795 | A | 11/1991 | Woog |
| 4,629,425 | A | 12/1986 | Detsch | 5,064,168 | A | 11/1991 | Raines et al. |
| 4,636,198 | A | 1/1987 | Stade | D322,314 | S | 12/1991 | Ohbayashi |
| 4,642,037 | A | 2/1987 | Fritchman | 5,071,346 | A | 12/1991 | Domaas |
| 4,644,937 | A | 2/1987 | Hommann | 5,082,115 | A | 1/1992 | Hutcheson |
| 4,645,488 | A | 2/1987 | Matukas | 5,082,443 | A | 1/1992 | Lohn |
| 4,647,831 | A | 3/1987 | O'Malley et al. | 5,085,317 | A | 2/1992 | Jensen et al. |
| 4,648,838 | A | 3/1987 | Schlachter | 5,086,756 | A | 2/1992 | Powell |
| 4,650,475 | A | 3/1987 | Smith et al. | 5,095,893 | A | 3/1992 | Rawden, Jr. |
| 4,655,198 | A | 4/1987 | Hommann | 5,098,291 | A | 3/1992 | Curtis et al. |
| 4,669,453 | A | 6/1987 | Atkinson et al. | 5,098,676 | A | 3/1992 | Brooks, Jr. |
| 4,672,953 | A | 6/1987 | DiVito | 5,100,319 | A | 3/1992 | Baum |
| 4,673,396 | A | 6/1987 | Urbaniak | 5,117,871 | A | 6/1992 | Gardner et al. |
| D291,354 | S | 8/1987 | Camens | 5,125,835 | A | 6/1992 | Young |
| 4,716,352 | A | 12/1987 | Hurn et al. | 5,127,831 | A | 7/1992 | Bab |
| 4,749,340 | A | 6/1988 | Ikeda et al. | 5,142,723 | A | 9/1992 | Lustig et al. |
| 4,770,632 | A | 9/1988 | Ryder et al. | 5,150,841 | A | 9/1992 | Silvenis et al. |
| D298,565 | S | 11/1988 | Kohler, Jr. et al. | 5,172,810 | A | 12/1992 | Brewer |
| 4,783,321 | A | 11/1988 | Spence | 5,173,273 | A | 12/1992 | Brewer |
| 4,787,845 | A | 11/1988 | Valentine | 5,183,035 | A | 2/1993 | Weir |
| 4,787,847 | A | 11/1988 | Martin et al. | 5,197,458 | A | 3/1993 | Ito et al. |
| 4,798,292 | A | 1/1989 | Hauze | 5,197,460 | A | 3/1993 | Ito et al. |
| 4,803,974 | A | 2/1989 | Powell | 5,199,871 | A | 4/1993 | Young |
| 4,804,364 | A | 2/1989 | Dieras et al. | 5,203,697 | A | 4/1993 | Malmin |
| 4,810,148 | A | 3/1989 | Aisa et al. | 5,203,769 | A | 4/1993 | Clement et al. |
| 4,818,229 | A | 4/1989 | Vasile | 5,204,004 | A | 4/1993 | Johnston et al. |
| 4,820,152 | A | 4/1989 | Warrin et al. | 5,208,933 | A | 5/1993 | Lustig et al. |
| 4,821,923 | A | 4/1989 | Skorka | 5,215,193 | A | 6/1993 | Dennis |
| 4,824,368 | A | 4/1989 | Hickman | 5,218,956 | A | 6/1993 | Handler et al. |
| 4,826,431 | A | 5/1989 | Fujimura et al. | 5,220,914 | A | 6/1993 | Thompson |
| 4,827,551 | A | 5/1989 | Maser et al. | 5,228,646 | A | 7/1993 | Raines |
| 4,832,683 | A | 5/1989 | Idemoto et al. | 5,230,624 | A | 7/1993 | Wolf et al. |
| 4,854,869 | A | 8/1989 | Lawhorn | 5,232,687 | A | 8/1993 | Geimer |
| 4,861,340 | A | 8/1989 | Smith et al. | 5,235,968 | A | 8/1993 | Woog |
| 4,862,876 | A | 9/1989 | Lih-Sheng | 5,241,714 | A | 9/1993 | Barry |
| 4,869,720 | A | 9/1989 | Chernack | 5,246,367 | A | 9/1993 | Ito et al. |
| 4,880,382 | A | 11/1989 | Moret et al. | 5,252,064 | A | 10/1993 | Baum et al. |
| 4,886,452 | A | 12/1989 | Lohn | D341,200 | S | 11/1993 | Yoshimoto |
| 4,900,252 | A | 2/1990 | Liefke et al. | 5,257,933 | A | 11/1993 | Jousson |
| 4,902,225 | A | 2/1990 | Lohn | 5,261,448 | A | 11/1993 | Furuya et al. |
| 4,903,687 | A | 2/1990 | Lih-Sheng | D341,943 | S | 12/1993 | Si-Hoe |
| 4,906,187 | A | 3/1990 | Amadera | 5,267,586 | A | 12/1993 | Jankavaara |
| 4,907,744 | A | 3/1990 | Jousson | 5,269,684 | A | 12/1993 | Fischer |
| 4,915,304 | A | 4/1990 | Campani | 5,281,137 | A | 1/1994 | Jousson |
| 4,925,450 | A | 5/1990 | Imonti et al. | 5,281,139 | A | 1/1994 | Frank et al. |
| 4,928,675 | A | 5/1990 | Thornton | 5,282,745 | A | 2/1994 | Wilttrout et al. |
| 4,930,660 | A | 6/1990 | Porteous | 5,286,192 | A | 2/1994 | Dixon |
| 4,941,459 | A | 7/1990 | Mathur | 5,286,201 | A | 2/1994 | Yu |
| 4,950,159 | A | 8/1990 | Hansen | 5,295,832 | A | 3/1994 | Evans |
| 4,958,629 | A | 9/1990 | Peace et al. | 5,297,962 | A | 3/1994 | O'Connor et al. |
| 4,958,751 | A | 9/1990 | Curtis et al. | D346,212 | S | 4/1994 | Hosl |
| | | | | 5,301,381 | A | 4/1994 | Klupt |
| | | | | 5,302,123 | A | 4/1994 | Bechard |
| | | | | 5,317,691 | A | 5/1994 | Traeger |
| | | | | 5,321,865 | A | 6/1994 | Kaeser |

(56)

References Cited

U.S. PATENT DOCUMENTS

| | | | | | | | |
|-----------|---|---------|-------------------|-----------|----|----------|-----------------------|
| 5,323,770 | A | 6/1994 | Ito et al. | 5,876,201 | A | 3/1999 | Wilson et al. |
| 5,331,704 | A | 7/1994 | Rosen et al. | D408,511 | S | 4/1999 | Allen et al. |
| 5,344,317 | A | 9/1994 | Pacher et al. | 5,901,397 | A | 5/1999 | Häfele et al. |
| 5,346,677 | A | 9/1994 | Risk | 5,934,902 | A | 8/1999 | Abahusayn |
| D351,892 | S | 10/1994 | Wolf et al. | D413,975 | S | 9/1999 | Maeda |
| 5,360,338 | A | 11/1994 | Waggoner | D416,999 | S | 11/1999 | Miyamoto |
| 5,368,548 | A | 11/1994 | Jousson | D417,082 | S | 11/1999 | Classen et al. |
| 5,370,534 | A | 12/1994 | Wolf et al. | 5,993,402 | A | 11/1999 | Sauer et al. |
| D354,168 | S | 1/1995 | Hartwein | 6,030,215 | A | 2/2000 | Ellion et al. |
| D354,559 | S | 1/1995 | Knute | 6,038,960 | A | 3/2000 | Fukushima et al. |
| 5,378,149 | A | 1/1995 | Stropko | 6,039,180 | A | 3/2000 | Grant |
| 5,380,201 | A | 1/1995 | Kawata | 6,047,429 | A | 4/2000 | Wu |
| D356,864 | S | 3/1995 | Woog | D424,181 | S | 5/2000 | Caplow |
| 5,399,089 | A | 3/1995 | Eichman et al. | D425,615 | S | 5/2000 | Bachman et al. |
| D358,883 | S | 5/1995 | Vos | D425,981 | S | 5/2000 | Bachman et al. |
| 5,456,672 | A | 10/1995 | Diederich et al. | 6,056,548 | A | 5/2000 | Neuberger et al. |
| 5,465,445 | A | 11/1995 | Yeh | 6,056,710 | A | 5/2000 | Bachman et al. |
| 5,467,495 | A | 11/1995 | Boland et al. | D426,633 | S | 6/2000 | Bachman et al. |
| 5,468,148 | A | 11/1995 | Ricks | 6,089,865 | A | 7/2000 | Edgar |
| 5,470,305 | A | 11/1995 | Arnett et al. | 6,116,866 | A | 9/2000 | Tomita et al. |
| 5,474,450 | A | 12/1995 | Chronister | 6,120,755 | A | 9/2000 | Jacobs |
| 5,474,451 | A | 12/1995 | Dalrymple et al. | 6,124,699 | A | 9/2000 | Suzuki et al. |
| 5,476,379 | A | 12/1995 | Disel | D434,500 | S | 11/2000 | Pollock et al. |
| 5,484,281 | A | 1/1996 | Renow et al. | 6,159,006 | A | 12/2000 | Cook et al. |
| 5,487,877 | A | 1/1996 | Choi | 6,164,967 | A | 12/2000 | Sale et al. |
| 5,490,779 | A | 2/1996 | Malmin | D435,905 | S | * 1/2001 | Bachman D24/111 |
| 5,505,916 | A | 4/1996 | Berry, Jr. | D437,049 | S | 1/2001 | Hartwein |
| D369,656 | S | 5/1996 | Vos | 6,193,512 | B1 | 2/2001 | Wallace |
| D370,125 | S | 5/1996 | Craft et al. | 6,193,932 | B1 | 2/2001 | Wu et al. |
| 5,525,058 | A | 6/1996 | Gallant et al. | 6,199,239 | B1 | 3/2001 | Dickerson |
| 5,526,841 | A | 6/1996 | Detsch et al. | 6,200,134 | B1 | 3/2001 | Kovac |
| 5,540,587 | A | 7/1996 | Malmin | D439,781 | S | 4/2001 | Spore |
| 5,547,374 | A | 8/1996 | Coleman | 6,217,835 | B1 | 4/2001 | Riley et al. |
| D373,631 | S | 9/1996 | Maeda et al. | D441,861 | S | 5/2001 | Haffiger |
| 5,554,014 | A | 9/1996 | Becker | 6,233,773 | B1 | 5/2001 | Karge et al. |
| 5,554,025 | A | 9/1996 | Kinsel | 6,234,205 | B1 | 5/2001 | D'Amelio et al. |
| 5,556,001 | A | 9/1996 | Weissman et al. | 6,237,178 | B1 | 5/2001 | Krammer et al. |
| 5,564,629 | A | 10/1996 | Weissman et al. | 6,247,929 | B1 | 6/2001 | Bachman et al. |
| D376,893 | S | 12/1996 | Gornet | 6,280,190 | B1 | 8/2001 | Hoffman |
| D377,091 | S | 12/1996 | Scott, Sr. | D448,236 | S | 9/2001 | Murray |
| 5,613,259 | A | 3/1997 | Craft et al. | 6,293,792 | B1 | 9/2001 | Hanson |
| 5,616,028 | A | 4/1997 | Hafele et al. | D449,884 | S | 10/2001 | Tobin et al. |
| 5,626,472 | A | 5/1997 | Pennetta | D453,453 | S | 2/2002 | Lun |
| 5,634,791 | A | 6/1997 | Matsuura et al. | D455,201 | S | 4/2002 | Jones |
| 5,636,987 | A | 6/1997 | Serfaty | D455,203 | S | 4/2002 | Jones |
| 5,640,735 | A | 6/1997 | Manning | 6,363,565 | B1 | 4/2002 | Paffrath |
| D382,407 | S | 8/1997 | Craft et al. | D457,949 | S | 5/2002 | Krug |
| 5,653,591 | A | 8/1997 | Loge | D464,799 | S | 10/2002 | Crossman et al. |
| 5,659,995 | A | 8/1997 | Hoffman | 6,468,482 | B1 | 10/2002 | Frieze et al. |
| 5,667,483 | A | 9/1997 | Santos | 6,475,173 | B1 | 11/2002 | Bachman et al. |
| D386,576 | S | 11/1997 | Wang et al. | 6,485,451 | B1 | 11/2002 | Roberts et al. |
| 5,683,192 | A | 11/1997 | Kilfoil | 6,497,375 | B1 | 12/2002 | Srinath et al. |
| 5,685,829 | A | 11/1997 | Allen | 6,497,572 | B2 | 12/2002 | Hood et al. |
| 5,685,851 | A | 11/1997 | Murphy et al. | D468,422 | S | 1/2003 | McCurrach |
| 5,697,784 | A | 12/1997 | Hafele et al. | 6,502,584 | B1 | 1/2003 | Fordham |
| D388,612 | S | 1/1998 | Stutzer et al. | D470,660 | S | 2/2003 | Schaber |
| D388,613 | S | 1/1998 | Stutzer et al. | 6,532,837 | B1 | 3/2003 | Magussen, Jr. |
| D389,091 | S | 1/1998 | Dickinson | 6,558,344 | B2 | 5/2003 | McKinnon et al. |
| 5,709,545 | A | 1/1998 | Johnston et al. | 6,561,808 | B2 | 5/2003 | Neuberger et al. |
| D390,934 | S | 2/1998 | McKeone | D475,346 | S | 6/2003 | McCurrach et al. |
| 5,716,007 | A | 2/1998 | Nottingham et al. | D476,743 | S | 7/2003 | D'Silva |
| 5,718,668 | A | 2/1998 | Arnett et al. | 6,589,477 | B1 | 7/2003 | Frieze et al. |
| 5,746,595 | A | 5/1998 | Ford | 6,602,071 | B1 | 8/2003 | Ellion et al. |
| 5,749,726 | A | 5/1998 | Kinsel | 6,632,091 | B1 | 10/2003 | Cise et al. |
| 5,759,502 | A | 6/1998 | Spencer et al. | D482,451 | S | 11/2003 | Page et al. |
| 5,779,471 | A | 7/1998 | Tseng et al. | 6,640,999 | B2 | 11/2003 | Peterson |
| 5,779,654 | A | 7/1998 | Foley et al. | 6,647,577 | B2 | 11/2003 | Tam |
| 5,795,153 | A | 8/1998 | Rechmann | 6,659,674 | B2 | 12/2003 | Carlucci et al. |
| 5,796,325 | A | 8/1998 | Lundell et al. | 6,663,386 | B1 | 12/2003 | Moelsgaard |
| 5,833,065 | A | 11/1998 | Burgess | 6,669,059 | B2 | 12/2003 | Mehta |
| 5,836,030 | A | 11/1998 | Hazeu et al. | D484,971 | S | 1/2004 | Hartwein |
| D402,744 | S | 12/1998 | Zuege | 6,681,418 | B1 | 1/2004 | Bierend |
| 5,851,079 | A | 12/1998 | Horstman et al. | D486,573 | S | 2/2004 | Callaghan et al. |
| D403,511 | S | 1/1999 | Serbinski | 6,689,078 | B1 | 2/2004 | Rehkemper et al. |
| D406,334 | S | 3/1999 | Rosenthal et al. | 6,699,208 | B2 | 3/2004 | Bachman et al. |
| | | | | 6,719,561 | B2 | 4/2004 | Gugel et al. |
| | | | | D489,183 | S | 5/2004 | Akahori et al. |
| | | | | 6,739,782 | B1 | 5/2004 | Rehkemper et al. |
| | | | | 6,740,053 | B2 | 5/2004 | Kaplowitz |

(56)

References Cited

U.S. PATENT DOCUMENTS

| | | | | | | | |
|-----------|----|---------|------------------|--------------|------|---------|----------------------------|
| D490,899 | S | 6/2004 | Gagnon | 7,959,597 | B2 | 6/2011 | Baker et al. |
| D491,728 | S | 6/2004 | Jimenez | D640,872 | S | 7/2011 | Nanda |
| D492,996 | S | 7/2004 | Rehkemper et al. | D648,539 | S | 11/2011 | Wai |
| 6,761,324 | B2 | 7/2004 | Chang | D648,941 | S | 11/2011 | Leung |
| 6,766,549 | B2 | 7/2004 | Klupt | D651,409 | S | 1/2012 | Papenfu |
| D495,142 | S | 8/2004 | Berde | D651,805 | S | 1/2012 | Hay |
| D495,143 | S | 8/2004 | Berde | D653,340 | S | 1/2012 | Goerge et al. |
| 6,779,216 | B2 | 8/2004 | Davies et al. | 8,113,832 | B2 | 2/2012 | Snyder et al. |
| 6,783,004 | B1 | 8/2004 | Rinner | D655,380 | S | 3/2012 | Taylor |
| 6,783,505 | B1 | 8/2004 | Lai | D658,381 | S | 5/2012 | Gebski |
| 6,796,796 | B2 | 9/2004 | Segal | D658,538 | S | 5/2012 | Korzeniowski |
| 6,808,331 | B2 | 10/2004 | Hall et al. | 8,220,726 | B2 | 7/2012 | Qiu et al. |
| D498,643 | S | 11/2004 | Pryor | D666,912 | S | 9/2012 | Kawai |
| 6,814,259 | B1 | 11/2004 | Foster et al. | 8,256,979 | B2 | 9/2012 | Hilscher et al. |
| D499,885 | S | 12/2004 | Xi | D668,339 | S | 10/2012 | Luoto |
| 6,835,181 | B2 | 12/2004 | Hippensteel | D669,169 | S | 10/2012 | Washington et al. |
| D500,599 | S | 1/2005 | Callaghan | 8,297,534 | B2 | 10/2012 | Li et al. |
| 6,836,917 | B2 | 1/2005 | Blaustein et al. | D670,373 | S | 11/2012 | Taylor et al. |
| 6,837,708 | B2 | 1/2005 | Chen et al. | D670,958 | S | 11/2012 | Picozza et al. |
| 6,884,069 | B2 | 4/2005 | Goldman | D671,637 | S | 11/2012 | Gebski et al. |
| 6,902,337 | B1 | 6/2005 | Kuo | D672,018 | S | 12/2012 | Bucher |
| 6,907,879 | B2 | 6/2005 | Drinan et al. | 8,366,024 | B2 | 2/2013 | Leber et al. |
| D509,585 | S | 9/2005 | Kling et al. | 8,403,577 | B2 | 3/2013 | Khoshnevis |
| D513,638 | S | 1/2006 | Pan | 8,403,665 | B2 | 3/2013 | Thomas et al. |
| D515,215 | S | 2/2006 | Wang | 8,408,483 | B2 | 4/2013 | Boyd et al. |
| D522,652 | S | 6/2006 | Massey | 8,418,300 | B2 | 4/2013 | Miller et al. |
| 7,080,980 | B2 | 7/2006 | Klupt | D686,311 | S | 7/2013 | Mori |
| D529,661 | S | 10/2006 | Schmidt | D694,378 | S | 11/2013 | Bates |
| D530,010 | S | 10/2006 | Luetzgen et al. | D694,398 | S | 11/2013 | Taylor |
| 7,117,555 | B2 | 10/2006 | Fattori et al. | D700,343 | S | 2/2014 | Liu |
| D532,570 | S | 11/2006 | Vizcarra | D702,819 | S | 4/2014 | Garland |
| 7,131,838 | B2 | 11/2006 | Suzuki et al. | D702,821 | S | 4/2014 | Garland |
| D533,720 | S | 12/2006 | Vu | D707,350 | S | 6/2014 | Woodard |
| 7,147,468 | B2 | 12/2006 | Snyder et al. | D709,183 | S | 7/2014 | Kemlein |
| D538,474 | S | 3/2007 | Sheppard et al. | D714,929 | S | 10/2014 | Kim et al. |
| D548,334 | S | 8/2007 | Izumi | D714,930 | S | 10/2014 | Kim et al. |
| D550,097 | S | 9/2007 | Lepoitevin | D717,412 | S | 11/2014 | Bucher |
| D553,980 | S | 10/2007 | VerWeyst | D717,427 | S | 11/2014 | Kim |
| 7,276,035 | B2 | 10/2007 | Lu | D717,547 | S | 11/2014 | Adriaenssen |
| 7,314,456 | B2 | 1/2008 | Shaw | D718,855 | S | 12/2014 | Kim et al. |
| D563,674 | S | 3/2008 | Beedham | D719,737 | S | 12/2014 | Adriaenssen |
| D565,175 | S | 3/2008 | Boyd et al. | D723,387 | S | 3/2015 | Fath |
| 7,344,510 | B1 | 3/2008 | Yande | D725,770 | S | 3/2015 | Kim et al. |
| D565,713 | S | 4/2008 | Gao | D731,640 | S | 6/2015 | Kim et al. |
| 7,367,803 | B2 | 5/2008 | Egeresi | D735,305 | S | 7/2015 | Obara |
| D574,952 | S | 8/2008 | Boyd et al. | D740,936 | S | 10/2015 | Kim et al. |
| 7,414,337 | B2 | 8/2008 | Wilkinson et al. | D745,329 | S | 12/2015 | Ong |
| D577,198 | S | 9/2008 | Jimenez | D745,423 | S | 12/2015 | Khattak |
| D577,814 | S | 9/2008 | Seki et al. | D746,975 | S | 1/2016 | Schenck |
| D581,279 | S | 11/2008 | Oates | D747,464 | S | 1/2016 | Taylor |
| 7,455,521 | B2 | 11/2008 | Fishburne, Jr. | D754,330 | S | 4/2016 | Kim et al. |
| 7,469,440 | B2 | 12/2008 | Boland et al. | D756,122 | S | 5/2016 | Taylor |
| D585,132 | S | 1/2009 | Pukall | D764,051 | S | 8/2016 | Wang |
| D588,262 | S | 3/2009 | Pukall | D766,423 | S | 9/2016 | Kim et al. |
| 7,500,584 | B2 | 3/2009 | Schutz | D772,396 | S | 11/2016 | Kim et al. |
| D590,492 | S | 4/2009 | Powell | D772,397 | S | 11/2016 | Kim et al. |
| D592,748 | S | 5/2009 | Boulton | D773,822 | S | 12/2016 | Sikora |
| D595,136 | S | 6/2009 | Canamasas Puigbo | D774,651 | S | 12/2016 | Kaib |
| D601,694 | S | 10/2009 | Rocklin | D776,253 | S | 1/2017 | Li |
| D601,697 | S | 10/2009 | Sobeich et al. | D782,326 | S | 3/2017 | Fath |
| D603,708 | S | 11/2009 | Handy | D782,656 | S | 3/2017 | Au |
| D608,430 | S | 1/2010 | Slothower | D782,657 | S | 3/2017 | Williams |
| 7,670,141 | B2 | 3/2010 | Thomas et al. | 9,597,161 | B2 * | 3/2017 | Luetzgen A61H 13/005 |
| 7,677,888 | B1 | 3/2010 | Halm | D783,810 | S * | 4/2017 | Kim D24/111 |
| D613,550 | S | 4/2010 | Picozza et al. | D786,422 | S | 5/2017 | Au |
| D621,949 | S | 8/2010 | Seki et al. | 9,642,677 | B2 | 5/2017 | Luetzgen et al. |
| D622,928 | S | 9/2010 | Griebel | D788,907 | S | 6/2017 | Kim |
| D623,376 | S | 9/2010 | Griebel | D790,859 | S | 7/2017 | McGarry |
| D625,105 | S | 10/2010 | Winkler | D797,278 | S * | 9/2017 | Uchida D24/111 |
| D625,406 | S | 10/2010 | Seki et al. | D798,440 | S | 9/2017 | Kim |
| 7,814,585 | B1 | 10/2010 | Reich | D799,217 | S | 10/2017 | Massee |
| D626,647 | S | 11/2010 | Amborn | D802,119 | S | 11/2017 | Kim |
| D629,884 | S | 12/2010 | Stephens | D809,650 | S * | 2/2018 | Kim D24/111 |
| 7,857,623 | B2 | 12/2010 | Grez | D825,741 | S * | 8/2018 | Massie D24/111 |
| 7,862,536 | B2 | 1/2011 | Chen et al. | D840,022 | S * | 2/2019 | Porter D24/111 |
| | | | | 2002/0090252 | A1 | 7/2002 | Hall et al. |
| | | | | 2002/0108193 | A1 | 8/2002 | Gruber |
| | | | | 2002/0119415 | A1 | 8/2002 | Bailey |
| | | | | 2002/0152565 | A1 | 10/2002 | Klupt |

(56)

References Cited

U.S. PATENT DOCUMENTS

- | | | | | | | | |
|--------------|----|---------|-------------------|--------------|-----|---------|-----------------------------|
| 2003/0060743 | A1 | 3/2003 | Chang | 2014/0259474 | A1 | 9/2014 | Sokol et al. |
| 2003/0098249 | A1 | 5/2003 | Rollock | 2014/0272769 | A1 | 9/2014 | Luetzgen et al. |
| 2003/0162146 | A1 | 8/2003 | Shortt et al. | 2014/0272782 | A1 | 9/2014 | Luetzgen et al. |
| 2003/0204155 | A1 | 10/2003 | Egeresi | 2014/0352088 | A1 | 12/2014 | Wu |
| 2003/0213075 | A1 | 11/2003 | Hui et al. | 2015/0004559 | A1 | 1/2015 | Luetzgen et al. |
| 2004/0045107 | A1 | 3/2004 | Egeresi | 2015/0147717 | A1 | 5/2015 | Taylor et al. |
| 2004/0076921 | A1 | 4/2004 | Gofman et al. | 2015/0173850 | A1 | 6/2015 | Garrigues et al. |
| 2004/0122377 | A1 | 6/2004 | Fischer et al. | 2015/0182319 | A1 | 7/2015 | Wagner et al. |
| 2004/0126730 | A1 | 7/2004 | Panagotacos | 2016/0100921 | A1 | 4/2016 | Ungar |
| 2004/0180569 | A1 | 10/2004 | Chiou | 2016/0151133 | A1 | 6/2016 | Luetzgen et al. |
| 2004/0209222 | A1 | 10/2004 | Snyder | 2017/0049530 | A1 | 2/2017 | Cacka |
| 2005/0049620 | A1 | 3/2005 | Chang | 2017/0239132 | A1 | 8/2017 | Luetzgen et al. |
| 2005/0064371 | A1 | 3/2005 | Soukos et al. | 2017/0252251 | A1* | 9/2017 | Williams A61C 17/0202 |
| 2005/0101894 | A1 | 5/2005 | Hippensteel | 2018/0168784 | A1* | 6/2018 | Wagner A61C 17/02 |
| 2005/0102773 | A1 | 5/2005 | Obermann et al. | 2018/0168785 | A1* | 6/2018 | Wagner A61C 17/0202 |
| 2005/0144745 | A1 | 7/2005 | Russell | 2018/0221260 | A1* | 8/2018 | Snyder A61K 8/44 |
| 2005/0177079 | A1 | 8/2005 | Pan | 2018/0263742 | A1* | 9/2018 | Taylor A61C 17/0202 |
| 2005/0271531 | A1 | 12/2005 | Brown et al. | 2018/0296308 | A1* | 10/2018 | Taylor A61C 17/0205 |
| 2006/0008373 | A1 | 1/2006 | Schutz | 2019/0192266 | A1* | 6/2019 | Snyder A61C 1/0046 |
| 2006/0010624 | A1 | 1/2006 | Cleland | | | | |
| 2006/0026784 | A1 | 2/2006 | Moskovich et al. | | | | |
| 2006/0057539 | A1 | 3/2006 | Sodo | | | | |
| 2006/0078844 | A1 | 4/2006 | Goldman et al. | | | | |
| 2006/0079818 | A1 | 4/2006 | Yande | | | | |
| 2006/0207052 | A1 | 9/2006 | Tran | | | | |
| 2007/0082316 | A1 | 4/2007 | Zhadanov et al. | | | | |
| 2007/0082317 | A1 | 4/2007 | Chuang | | | | |
| 2007/0113360 | A1 | 5/2007 | Tsai | | | | |
| 2007/0202459 | A1 | 8/2007 | Boyd et al. | | | | |
| 2007/0203439 | A1 | 8/2007 | Boyd et al. | | | | |
| 2007/0254260 | A1 | 11/2007 | Alden | | | | |
| 2008/0189951 | A1 | 8/2008 | Molema et al. | | | | |
| 2008/0213719 | A1 | 9/2008 | Giniger et al. | | | | |
| 2008/0253906 | A1 | 10/2008 | Strong | | | | |
| 2009/0070949 | A1 | 3/2009 | Sagel et al. | | | | |
| 2009/0071267 | A1 | 3/2009 | Mathus et al. | | | | |
| 2009/0082706 | A1 | 3/2009 | Shaw | | | | |
| 2009/0124945 | A1 | 5/2009 | Reich et al. | | | | |
| 2009/0139351 | A1 | 6/2009 | Reichmuth | | | | |
| 2009/0163839 | A1 | 6/2009 | Alexander | | | | |
| 2009/0188780 | A1 | 7/2009 | Watanabe | | | | |
| 2009/0281454 | A1 | 11/2009 | Baker et al. | | | | |
| 2010/0010524 | A1 | 1/2010 | Barrington | | | | |
| 2010/0015566 | A1 | 1/2010 | Shaw | | | | |
| 2010/0049177 | A1 | 2/2010 | Boone, III et al. | | | | |
| 2010/0190132 | A1 | 7/2010 | Taylor et al. | | | | |
| 2010/0239998 | A1 | 9/2010 | Snyder et al. | | | | |
| 2010/0261134 | A1 | 10/2010 | Boyd et al. | | | | |
| 2010/0261137 | A1 | 10/2010 | Boyd et al. | | | | |
| 2010/0326536 | A1 | 12/2010 | Nan | | | | |
| 2010/0330527 | A1 | 12/2010 | Boyd et al. | | | | |
| 2011/0027749 | A1 | 2/2011 | Syed | | | | |
| 2011/0076090 | A1 | 3/2011 | Wu et al. | | | | |
| 2011/0097683 | A1 | 4/2011 | Boyd et al. | | | | |
| 2011/0139826 | A1 | 6/2011 | Hair et al. | | | | |
| 2011/0144588 | A1 | 6/2011 | Taylor et al. | | | | |
| 2011/0184341 | A1 | 7/2011 | Baker et al. | | | | |
| 2011/0307039 | A1 | 12/2011 | Cornell | | | | |
| 2012/0021374 | A1 | 1/2012 | Cacka et al. | | | | |
| 2012/0045730 | A1 | 2/2012 | Snyder et al. | | | | |
| 2012/0064480 | A1 | 3/2012 | Hegemann | | | | |
| 2012/0077145 | A1 | 3/2012 | Tsurukawa | | | | |
| 2012/0141952 | A1 | 6/2012 | Snyder et al. | | | | |
| 2012/0179118 | A1 | 7/2012 | Hair | | | | |
| 2012/0189976 | A1 | 7/2012 | McDonough et al. | | | | |
| 2012/0266396 | A1 | 10/2012 | Leung | | | | |
| 2012/0277663 | A1 | 11/2012 | Millman et al. | | | | |
| 2012/0277677 | A1 | 11/2012 | Taylor et al. | | | | |
| 2012/0277678 | A1 | 11/2012 | Taylor et al. | | | | |
| 2012/0279002 | A1 | 11/2012 | Sokol et al. | | | | |
| 2012/0295220 | A1 | 11/2012 | Thomas et al. | | | | |
| 2013/0089832 | A1 | 4/2013 | Lee | | | | |
| 2013/0295520 | A1 | 11/2013 | Hsieh | | | | |
| 2014/0106296 | A1 | 4/2014 | Woodard et al. | | | | |
| 2014/0193774 | A1 | 7/2014 | Snyder et al. | | | | |

FOREIGN PATENT DOCUMENTS

| | | |
|----|---------------|---------|
| CN | 204049908 | 12/2014 |
| DE | 1466963 | 5/1969 |
| DE | 2019003 | 11/1971 |
| DE | 2409752 | 9/1975 |
| DE | 2545936 | 4/1977 |
| DE | 2714876 | 10/1978 |
| DE | 2910982 | 2/1980 |
| DE | 3346651 | 7/1985 |
| EP | 0023672 | 7/1980 |
| EP | 0515983 | 2/1992 |
| EP | 1825827 | 8/2007 |
| FR | 2556954 | 6/1985 |
| FR | 2654627 | 5/1991 |
| GB | 838564 | 6/1960 |
| GB | 1182031 | 2/1970 |
| GB | 2018605 | 10/1979 |
| JP | 2-134150 | 5/1990 |
| JP | 2009-39455 | 2/2009 |
| KR | 20120126265 | 11/2012 |
| WO | WO95/016404 | 6/1995 |
| WO | WO01/10327 | 2/2001 |
| WO | WO04/021958 | 3/2004 |
| WO | WO04/039205 | 5/2004 |
| WO | WO2004/060259 | 7/2004 |
| WO | WO2004/062518 | 7/2004 |
| WO | WO2008/070730 | 6/2008 |
| WO | WO2008/157585 | 12/2008 |
| WO | WO2013/124691 | 8/2013 |

OTHER PUBLICATIONS

The Right Tool, Electron Fusion Devices, Inc., 2 pages, at least as early as Feb. 1991.

Japanese Packaging, 2 pages, at least as early as Dec. 2002.

Japanese Instruction Brochure, 20 pages, at least as early as Dec. 2002.

Brochure: Woog International, "You have a 98% chance of getting gum disease. Unless you read this.", Lancaster, Pennsylvania, 5 pages, Feb. 1987.

Brochure: Woog International, "We put the control of home dental care back into the hands of the professional", Lancaster, Pennsylvania, 2 pages, Feb. 1987.

Brochure: Woog International, "Products at a Glance: Home Dental Care System" Woog Orajet, 3 pages, at least as early as Dec. 18, 1998.

Website: http://www.just4teeth.com/product/Panasonic/Panasonic_Portable_Irrigator.htm, 2 pages, at least as early as Jun. 20, 2003.

Website: http://www.videodirectstore.com/store/merchant.mv?Screen=PROD&Product_Code=EW1'..., 2 pages, at least as early as Jun. 20, 2003.

Website: <http://products.consumerguide.com/cp/family/review/index.cfm/id/18742>, 2 pages, at least as early as Jun. 20, 2003.

(56)

References Cited

OTHER PUBLICATIONS

Website: <http://www.racekarteng.com/images/walbroparts.gif> and <http://www.muller.net/mullermachine/docs/walbro1.html>, 4 pages, at least as early as Jun. 20, 2003.

European Search Report, EPO Application No. 07250799.9, dated Jul. 5, 2007.

European Search Report, EPO Application No. 07252693.2, 14 pages, dated Apr. 28, 2008.

European Examination Report, EPO Application No. 07250799.9, dated Feb. 5, 2009.

International Search Report, Application No. PCT/US2010/028180, 2 pages, dated May 18, 2010.

International Search Report, PCT/US2010/060800, 2 pages, dated Feb. 11, 2011.

International Search Report, PCT/US2011/052795, 10 pages, dated Jan. 17, 2012.

Waterpik SinuSense Website: <http://www.insightsbyapril.com/2012/03/waterpik-natural-remedy-for-sinus.html>, 8 pages, retrieved on May 31, 2012.

Website: <https://www.waterpik.com/about-us/>, 3 pages.

Waterpik WP 350W Oral Irrigator. Dentist.net. Copyright date 2013. Date accessed: Mar. 30, 2017, 2 pages.

iPik Portable Oral Irrigator. AliExpress. Date reviewed: Oct. 5, 2016. https://www.aliexpress.com/...e-Oral-Care-Product-Nasal-Irrigator-Tooth-Flosser-Water/1525541997.html?aff_platform=aaf&cpt=1490913714609&sk=yfAeyJa&aff_trace_key=c5a300c4f02e46d08c042f5292e1762f-1490913714609-07517-yfAeyJa, 18 pages.

Brite Leafs Professional Portable 2-in-1 Nasal Sinus & Oral Irrigator. Brite Leafs. Copyright date 2012, <http://www.briteleafs.com/product6.html>, 1 page.

Ali Express. Date reviewed: Jan. 12, 2017. <https://www.aliexpress.com/item/Cordless-Water-Floss-Portable-Oral-Irrigator-Dental-Water-Flosser-Waterpic-Whatpick-Dental-Water-Pic-Whater-Pick/32769416341.html?spm=2114.40010308.4.75.Owuzfj>.

Suvo. "Helical Gears vs Spur Gears—Advantages and Disadvantages Compared." BrightHub Engineering, Aug. 18, 2010, www.brighthubengineering.com/manufacturing-technology/33535-helical-gears-vs-spur-gears/, 7 pages.

Waterpik ADA Accepted WP-663, posted at amazon.com, earliest date reviewed on Feb. 6, 2014, [online], acquired on Feb. 12, 2018. Available from Internet, <URL: https://www.amazon.com/Waterpik-Accepted-WP-663-Aquarius-Flosser/dp/B072JFVXSY/ref=cm_cr_arp_d_product_top?ie=UTF8&th=1> (Year: 2014).

* cited by examiner

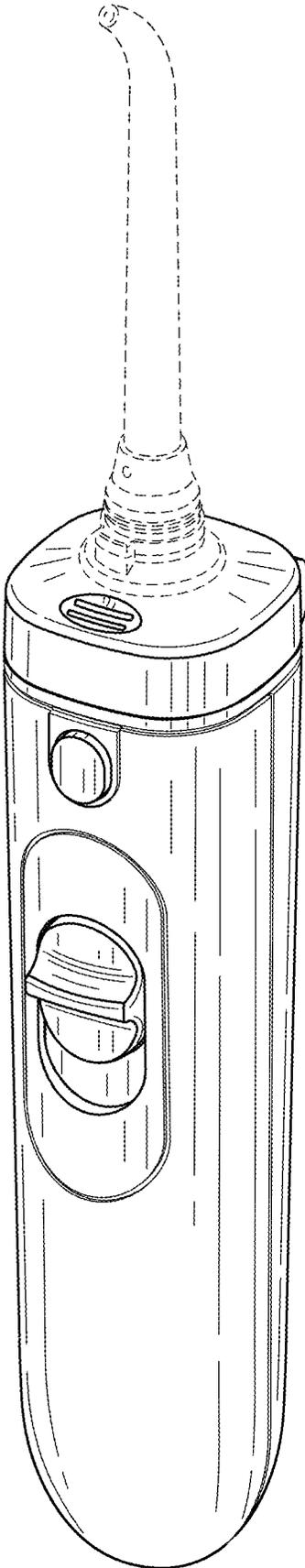


FIG. 1

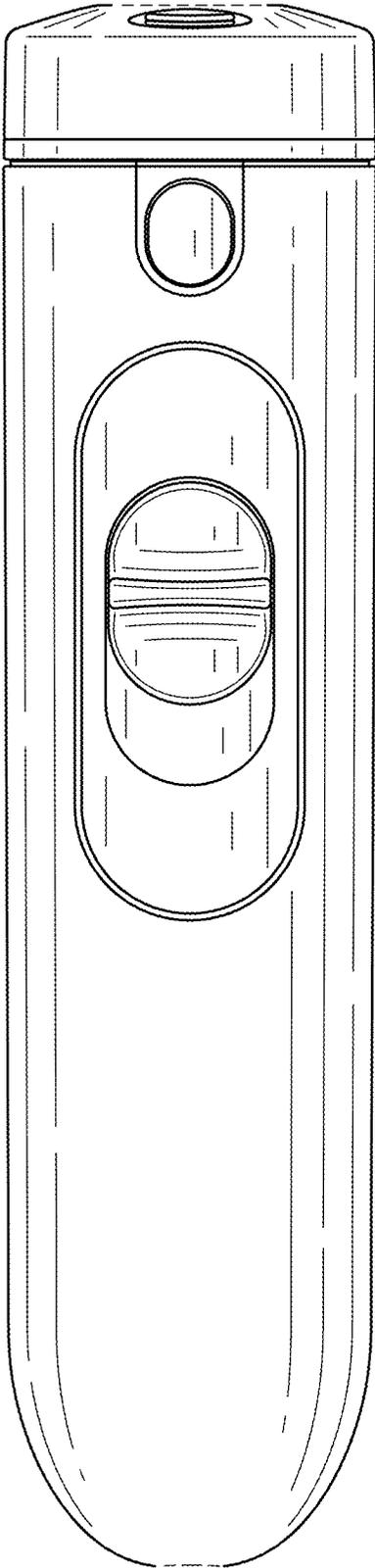


FIG. 2

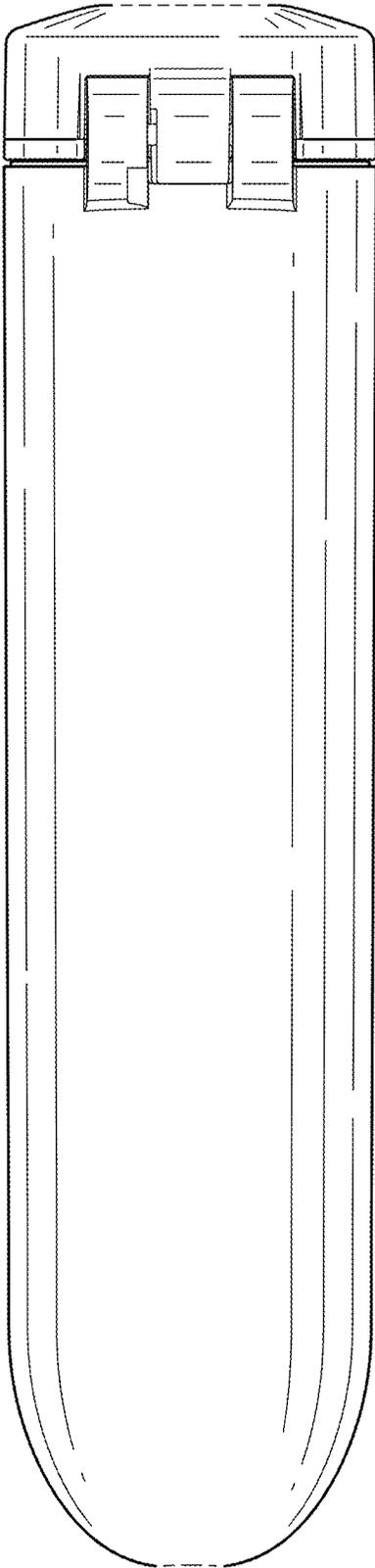


FIG. 3

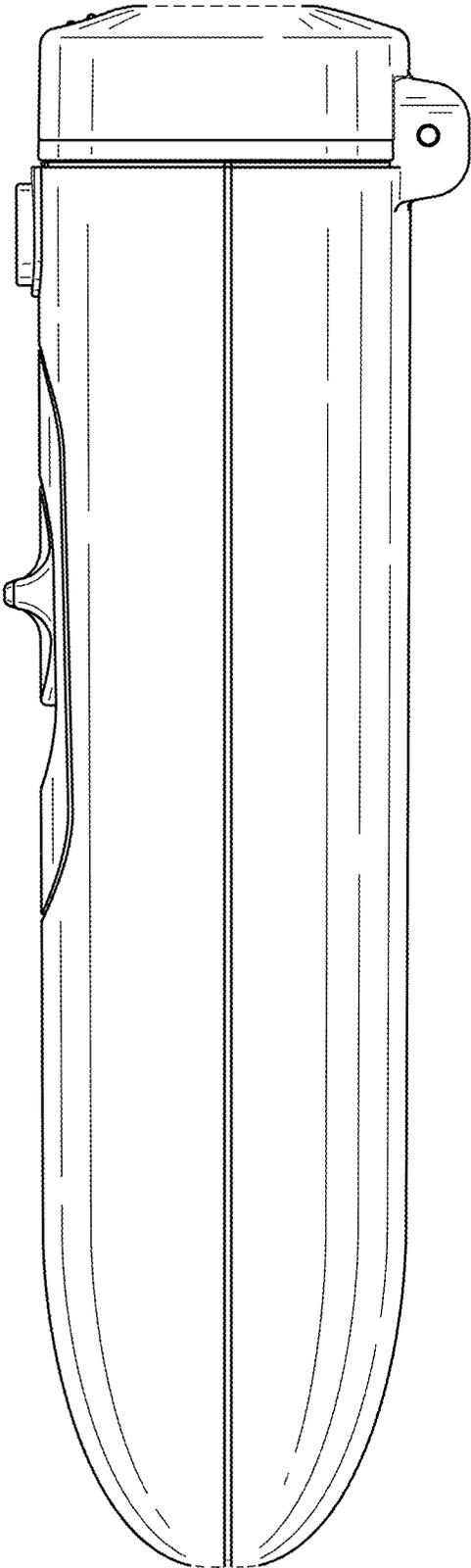


FIG. 4

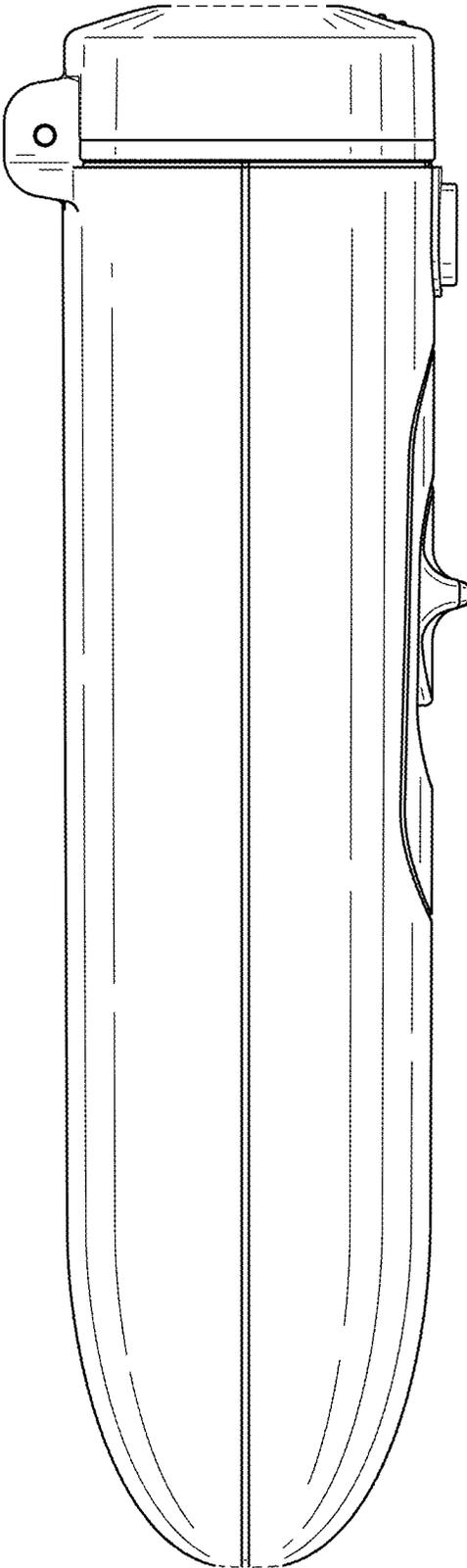


FIG. 5

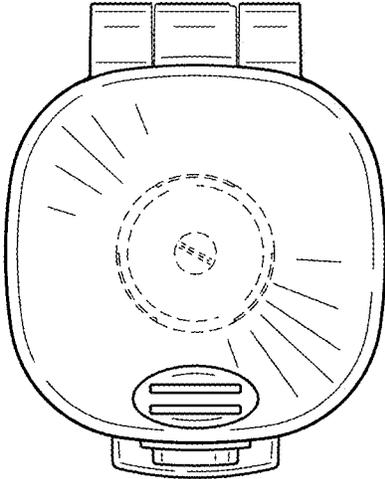


FIG. 6

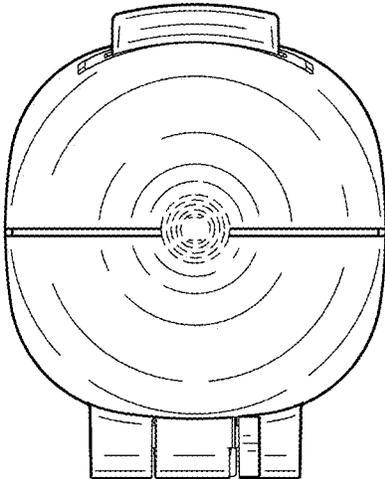


FIG. 7