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(12) **United States Design Patent**
Lombardi, III et al.

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(54) **CONNECTOR FOR FLUID TUBING**
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Collins, CO (US)

727,982 A 5/1903 Ludwig
874,957 A 12/1907 Godley
884,461 A 4/1908 Browne
909,131 A 1/1909 Antic
951,889 A 3/1910 Teuer

(Continued)

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(US)

FOREIGN PATENT DOCUMENTS

(**) Term: **14 Years**

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(21) Appl. No.: **29/353,314**

Primary Examiner—Charles A Rademaker

Assistant Examiner—Charles D Hanson

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(74) *Attorney, Agent, or Firm*—Dorsey & Whitney LLP

(57) **CLAIM**

Related U.S. Application Data

We claim the ornamental design for a connector for fluid tubing, as shown and described.

(63) Continuation-in-part of application No. 12/167,833, filed on Jul. 3, 2008.

DESCRIPTION

(51) **LOC (9) Cl.** **24-02**

This application is related to U.S. design patent application Ser. No. 29/353,317 filed Jan. 6, 2010 and to U.S. design patent application Ser. No. 29/353,318 filed Jan. 6, 2010.

(52) **U.S. Cl.** **D24/129**

(58) **Field of Classification Search** D24/108–110.5,
D24/127, 129; 285/304–321

FIG. 1 is a top left perspective view of a connector for fluid tubing showing our new design;

See application file for complete search history.

FIG. 2 is a left side elevation thereof;

(56) **References Cited**

U.S. PATENT DOCUMENTS

163,261 A 5/1875 Ruppenthal
185,896 A 1/1877 Curtis
187,982 A 3/1877 Pirsson et al.
200,944 A 3/1878 Smith
235,580 A 12/1880 Smith et al.
327,509 A 10/1885 Aldridge
465,868 A 12/1891 List
584,008 A 6/1897 Munson
725,421 A 4/1903 Dinkins

FIG. 3 is a right side elevation thereof;

FIG. 4 is a front elevation thereof;

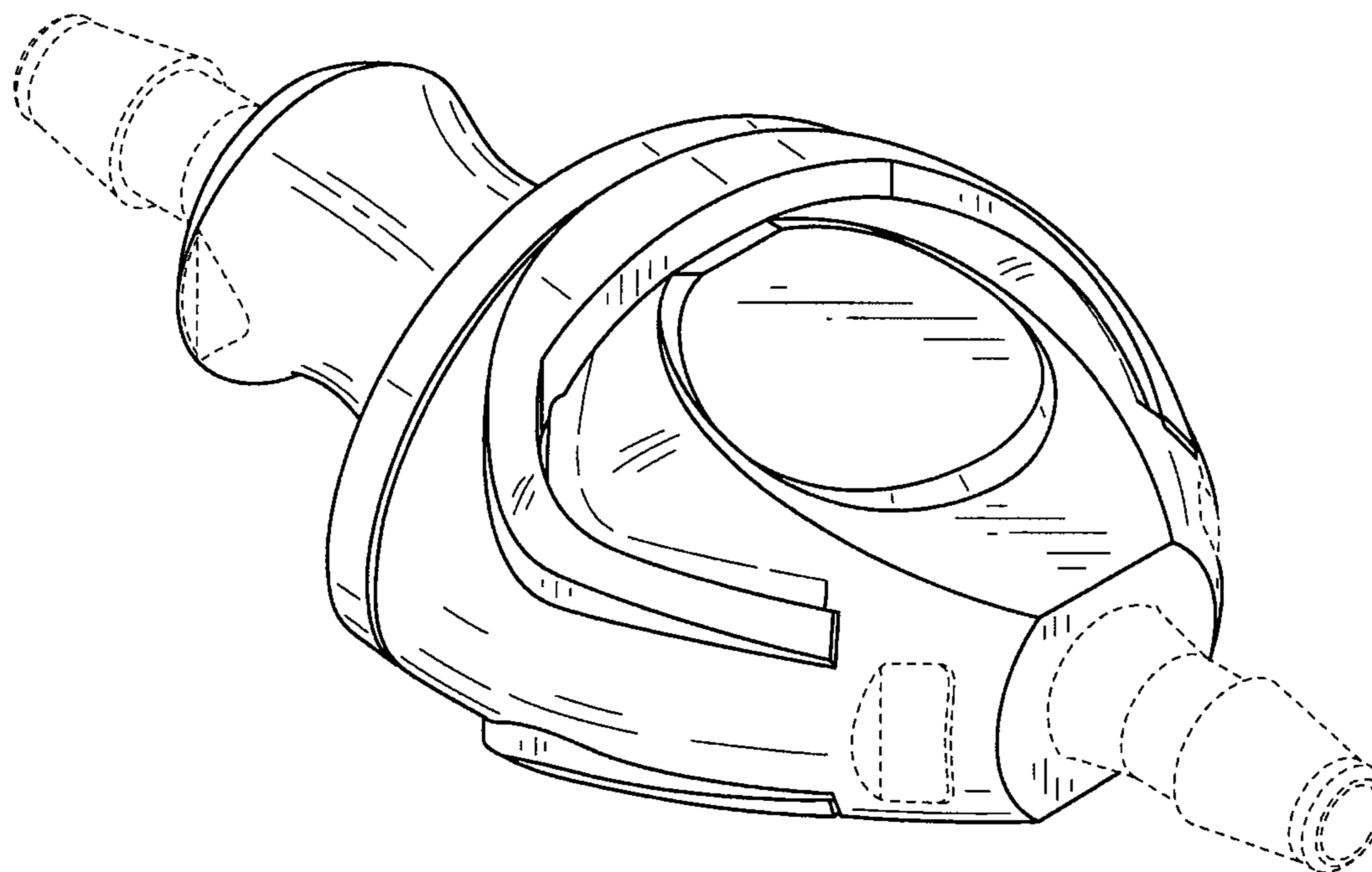
FIG. 5 is a rear elevation thereof;

FIG. 6 is a rear elevation thereof; and,

FIG. 7 is a bottom plan view thereof.

The broken lines shown in the drawings are for illustrative purposes only and form no part of the claimed design.

1 Claim, 6 Drawing Sheets



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| U.S. PATENT DOCUMENTS | | | | | |
|-----------------------|---------|-----------------|-------------|---------|--------------------------|
| | | | 3,352,576 A | 11/1967 | Thomas |
| | | | 3,382,892 A | 5/1968 | Cerbin |
| | | | 3,403,930 A | 10/1968 | Bernier |
| | | | 3,448,760 A | 6/1969 | Cranage |
| | | | 3,450,424 A | 6/1969 | Calisher |
| | | | 3,512,808 A | 5/1970 | Graham |
| | | | 3,523,701 A | 8/1970 | Graham |
| | | | 3,538,940 A | 11/1970 | Graham |
| | | | 3,542,338 A | 11/1970 | Scaramucci |
| | | | 3,545,490 A | 12/1970 | Burrus |
| | | | 3,550,626 A | 12/1970 | Daniels et al. |
| | | | 3,560,027 A | 2/1971 | Graham |
| | | | 3,563,265 A | 2/1971 | Graham |
| | | | 3,574,314 A | 4/1971 | Quercia |
| | | | 3,588,149 A | 6/1971 | Demler |
| | | | 3,596,933 A | 8/1971 | Luckenbill |
| | | | 3,599,843 A | 8/1971 | Johnston |
| | | | 3,600,917 A | 8/1971 | Krock |
| | | | 3,690,336 A | 9/1972 | Drum |
| | | | 3,712,583 A | 1/1973 | Martindale et al. |
| | | | 3,750,238 A | 8/1973 | Tanner |
| | | | 3,815,887 A | 6/1974 | Curtis et al. |
| | | | 3,817,561 A | 6/1974 | Kay |
| | | | 3,876,234 A | 4/1975 | Harms |
| | | | 3,889,710 A | 6/1975 | Brost |
| | | | 3,899,200 A | 8/1975 | Gamble |
| | | | 3,921,656 A | 11/1975 | Meisenheimer, Jr. et al. |
| | | | 3,979,934 A | 9/1976 | Isenmann |
| | | | 3,990,674 A | 11/1976 | Schattenberg |
| | | | 4,025,049 A | 5/1977 | Schmidt |
| | | | 4,039,213 A | 8/1977 | Walters |
| | | | 4,072,330 A | 2/1978 | Brysch |
| | | | 4,099,748 A | 7/1978 | Kavick |
| | | | 4,129,145 A | 12/1978 | Wynn |
| | | | 4,142,546 A | 3/1979 | Sandau |
| | | | D252,470 S | 7/1979 | Pawlak |
| | | | 4,181,149 A | 1/1980 | Cox |
| | | | D254,505 S | 3/1980 | Parsons et al. |
| | | | D255,145 S | 5/1980 | Nederman |
| | | | 4,220,360 A | 9/1980 | Jacek et al. |
| | | | D258,526 S | 3/1981 | Nederman |
| | | | D259,278 S | 5/1981 | McCaw |
| | | | 4,271,865 A | 6/1981 | Galloway et al. |
| | | | 4,287,644 A | 9/1981 | Durand |
| | | | 4,296,949 A | 10/1981 | Muetterties et al. |
| | | | 4,319,774 A | 3/1982 | Kavick |
| | | | 4,330,010 A | 5/1982 | Drescher et al. |
| | | | 4,330,142 A | 5/1982 | Paini |
| | | | 4,331,175 A | 5/1982 | Brake et al. |
| | | | 4,331,177 A | 5/1982 | Makishima |
| | | | 4,340,200 A | 7/1982 | Stegmeier |
| | | | 4,345,786 A | 8/1982 | Egert |
| | | | 4,346,703 A | 8/1982 | Dennehey |
| | | | 4,351,351 A | 9/1982 | Flory et al. |
| | | | 4,366,816 A | 1/1983 | Bayard et al. |
| | | | 4,393,548 A | 7/1983 | Herb |
| | | | 4,397,442 A | 8/1983 | Larkin |
| | | | 4,434,121 A | 2/1984 | Schaper |
| | | | 4,436,125 A | 3/1984 | Blenkush |
| | | | 4,437,689 A | 3/1984 | Goebel et al. |
| | | | 4,439,188 A | 3/1984 | Dennehey |
| | | | 4,458,719 A | 7/1984 | Strybel |
| | | | 4,500,118 A | 2/1985 | Blenkush |
| | | | 4,527,745 A | 7/1985 | Butterfield et al. |
| | | | 4,541,457 A | 9/1985 | Blenkush |
| | | | 4,541,657 A | 9/1985 | Smyth |
| | | | D282,962 S | 3/1986 | Gerber |
| | | | 4,603,888 A | 8/1986 | Goodall et al. |
| | | | 4,613,112 A | 9/1986 | Phlipot et al. |
| | | | 4,616,859 A | 10/1986 | Brunet |
| | | | 4,632,436 A | 12/1986 | Kimura |
| | | | 4,658,326 A | 4/1987 | Clark et al. |
| | | | 4,694,544 A | 9/1987 | Chapman |
| 1,029,819 A | 6/1912 | Nylander | | | |
| 1,033,187 A | 7/1912 | Metzger | | | |
| 1,039,354 A | 9/1912 | Bonadio | | | |
| 1,077,417 A | 11/1913 | McCracken | | | |
| 1,078,112 A | 11/1913 | Storm | | | |
| 1,193,446 A | 8/1916 | Wells | | | |
| 1,239,345 A | 9/1917 | Brown | | | |
| 1,255,847 A | 2/1918 | Arkin | | | |
| 1,259,684 A | 3/1918 | Vinten | | | |
| 1,489,310 A | 4/1924 | Critchlow | | | |
| 1,526,218 A | 2/1925 | Johnson | | | |
| 1,578,504 A | 3/1926 | Bronson et al. | | | |
| 1,587,079 A | 6/1926 | Machino | | | |
| 1,767,073 A | 6/1930 | Ingold | | | |
| 1,863,360 A | 6/1932 | Weatherhead | | | |
| 1,950,947 A | 3/1934 | Mulroyan | | | |
| 2,023,428 A | 12/1935 | Liebhardt | | | |
| 2,056,524 A | 10/1936 | Johnson | | | |
| 2,066,473 A | 1/1937 | Jorgensen | | | |
| 2,097,628 A | 11/1937 | Liebhardt | | | |
| 2,099,335 A | 11/1937 | Hansen | | | |
| 2,108,714 A | 2/1938 | Hirsch et al. | | | |
| 2,139,745 A | 12/1938 | Goodall | | | |
| 2,147,355 A | 2/1939 | Scholtes | | | |
| 2,159,116 A | 5/1939 | Zacharias | | | |
| 2,211,147 A | 8/1940 | Miller | | | |
| 2,257,321 A | 9/1941 | Arnold | | | |
| 2,263,293 A | 11/1941 | Ewald | | | |
| 2,340,119 A | 1/1944 | Graham | | | |
| 2,346,445 A | 4/1944 | Merker et al. | | | |
| 2,352,728 A | 7/1944 | Merker et al. | | | |
| 2,429,782 A | 10/1947 | Versoy | | | |
| 2,432,946 A | 12/1947 | Theunissen | | | |
| 2,470,800 A | 5/1949 | Ashton | | | |
| 2,479,499 A | 8/1949 | Le Clair | | | |
| 2,500,720 A | 3/1950 | Van der Heem | | | |
| 2,507,536 A | 5/1950 | Goodson | | | |
| 2,516,583 A | 7/1950 | Moore | | | |
| 2,535,740 A | 12/1950 | Knopp | | | |
| 2,577,009 A | 12/1951 | Frantz | | | |
| 2,626,974 A | 1/1953 | Howard et al. | | | |
| 2,630,131 A | 3/1953 | Snyder | | | |
| 2,661,018 A | 12/1953 | Snyder | | | |
| 2,701,147 A | 2/1955 | Summerville | | | |
| 2,722,399 A | 11/1955 | Oetiker | | | |
| 2,753,195 A | 7/1956 | Palmer | | | |
| 2,774,616 A | 12/1956 | Dodd et al. | | | |
| 2,790,571 A | 4/1957 | Flaith et al. | | | |
| 2,864,628 A | 12/1958 | Edleson | | | |
| 2,915,325 A | 12/1959 | Foster | | | |
| 2,926,934 A | 3/1960 | Gill | | | |
| 2,931,668 A | 4/1960 | Baley | | | |
| 2,937,892 A | 5/1960 | Prescott, Jr. | | | |
| 2,948,553 A | 8/1960 | Gill et al. | | | |
| 2,991,090 A | 7/1961 | De Cenzo | | | |
| 3,017,203 A | 1/1962 | Macleod | | | |
| 3,037,497 A | 6/1962 | Roberson | | | |
| 3,073,342 A | 1/1963 | Magorien | | | |
| 3,078,068 A | 2/1963 | Romney | | | |
| D196,473 S | 10/1963 | Hill | | | |
| 3,124,157 A | 3/1964 | Krzewina | | | |
| 3,171,196 A | 3/1965 | Helitas | | | |
| 3,217,771 A | 11/1965 | Beall et al. | | | |
| 3,227,380 A | 1/1966 | Pinkston | | | |
| 3,237,974 A | 3/1966 | Press | | | |
| 3,245,703 A | 4/1966 | Manly | | | |
| 3,276,799 A | 10/1966 | Moore et al. | | | |
| 3,279,497 A | 10/1966 | Norton et al. | | | |
| 3,314,696 A | 4/1967 | Ferguson et al. | | | |
| D209,166 S | 11/1967 | Hunt | | | |
| D209,168 S | 11/1967 | Hunt | | | |

US D630,320 S

| | | | | | |
|---------------|---------|-------------------------|----------------|---------|------------------------------|
| 4,699,298 A | 10/1987 | Grant et al. | 5,568,946 A | 10/1996 | Jackowski |
| 4,703,957 A | 11/1987 | Blenkush | 5,595,217 A | 1/1997 | Gillen et al. |
| 4,706,847 A | 11/1987 | Sankey et al. | 5,628,726 A | 5/1997 | Cotter |
| 4,712,280 A | 12/1987 | Fildan | D380,262 S | 6/1997 | Van Funderburk et al. |
| 4,738,401 A | 4/1988 | Filicicchia | D382,639 S * | 8/1997 | Musgrave et al. D24/129 |
| 4,753,268 A | 6/1988 | Palau | D387,147 S | 12/1997 | Vandermast et al. |
| 4,776,067 A | 10/1988 | Sorensen | 5,695,223 A | 12/1997 | Boticki |
| 4,790,567 A | 12/1988 | Kawano et al. | D388,876 S | 1/1998 | Sampson |
| 4,790,569 A | 12/1988 | Chaffee | 5,709,244 A | 1/1998 | Patriquin et al. |
| 4,792,115 A | 12/1988 | Jindra et al. | 5,725,258 A | 3/1998 | Kujawski |
| 4,793,637 A | 12/1988 | Laipply et al. | 5,737,810 A | 4/1998 | Krauss |
| D300,361 S | 3/1989 | Tokarz | 5,745,957 A | 5/1998 | Khokhar et al. |
| 4,827,921 A | 5/1989 | Rugheimer | 5,746,414 A | 5/1998 | Weldon et al. |
| 4,832,237 A | 5/1989 | Hurford, Jr. | 5,762,646 A | 6/1998 | Cotter |
| 4,834,423 A | 5/1989 | DeLand | 5,799,987 A | 9/1998 | Sampson |
| 4,844,512 A | 7/1989 | Gahwiler | 5,820,614 A | 10/1998 | Erskine et al. |
| 4,863,201 A | 9/1989 | Carstens | 5,845,943 A | 12/1998 | Ramacier, Jr. et al. |
| 4,896,402 A | 1/1990 | Jansen et al. | 5,855,568 A | 1/1999 | Battiato et al. |
| 4,900,065 A | 2/1990 | Houck | 5,882,047 A | 3/1999 | Ostrander et al. |
| 4,903,995 A | 2/1990 | Blenkush et al. | D407,803 S | 4/1999 | Redman |
| 4,923,228 A | 5/1990 | Laipply et al. | 5,897,142 A | 4/1999 | Kulevsky |
| 4,934,655 A | 6/1990 | Blenkush et al. | 5,911,367 A | 6/1999 | McInerney |
| 4,935,992 A | 6/1990 | Due | 5,911,403 A | 6/1999 | deCler et al. |
| 4,949,745 A | 8/1990 | McKeon | 5,911,404 A | 6/1999 | Cheng |
| 4,966,398 A * | 10/1990 | Peterson 285/319 | 5,930,424 A | 7/1999 | Heimberger et al. |
| 4,969,879 A | 11/1990 | Lichte | 5,938,244 A | 8/1999 | Meyer |
| D313,067 S | 12/1990 | Kotake et al. | 5,941,577 A | 8/1999 | Musellec |
| D313,277 S | 12/1990 | Haining | D413,967 S | 9/1999 | Yuen |
| D314,050 S | 1/1991 | Sone | 5,957,898 A | 9/1999 | Jepson et al. |
| D314,233 S | 1/1991 | Medvick | 5,964,485 A | 10/1999 | Hame et al. |
| 4,982,736 A | 1/1991 | Schneider | 5,975,489 A | 11/1999 | deCler et al. |
| 4,991,880 A | 2/1991 | Bernart | 5,984,378 A | 11/1999 | Ostrander et al. |
| 5,009,252 A | 4/1991 | Faughn | 6,015,171 A | 1/2000 | Schorn |
| 5,033,777 A | 7/1991 | Blenkush | D419,861 S | 2/2000 | Khokhar |
| D319,312 S * | 8/1991 | Schneider D24/129 | 6,024,124 A | 2/2000 | Braun et al. |
| 5,052,725 A | 10/1991 | Meyer et al. | 6,029,701 A | 2/2000 | Chaffardon et al. |
| 5,074,601 A | 12/1991 | Spors et al. | 6,032,691 A | 3/2000 | Powell et al. |
| 5,076,615 A | 12/1991 | Sampson | D422,487 S | 4/2000 | Khokhar |
| 5,078,429 A | 1/1992 | Braut et al. | 6,050,297 A | 4/2000 | Ostrowski et al. |
| 5,090,448 A | 2/1992 | Truchet | 6,076,234 A | 6/2000 | Khokhar et al. |
| 5,090,747 A | 2/1992 | Kotake | 6,077,259 A | 6/2000 | Caizza et al. |
| 5,094,482 A | 3/1992 | Petty et al. | 6,082,401 A | 7/2000 | Braun et al. |
| 5,104,158 A | 4/1992 | Meyer et al. | 6,089,540 A | 7/2000 | Heinrichs et al. |
| D326,155 S | 5/1992 | Boehringer et al. | 6,112,855 A | 9/2000 | Camacho et al. |
| 5,112,084 A | 5/1992 | Washizu | 6,123,690 A | 9/2000 | Mejslov |
| 5,114,250 A | 5/1992 | Usui | 6,135,150 A | 10/2000 | Powell et al. |
| 5,123,677 A | 6/1992 | Kreczko et al. | 6,135,992 A | 10/2000 | Wang |
| 5,160,177 A | 11/1992 | Washizu | 6,152,914 A | 11/2000 | Van De Kerkhof et al. |
| 5,165,733 A | 11/1992 | Sampson | 6,161,578 A | 12/2000 | Braun et al. |
| 5,176,406 A | 1/1993 | Straghan | 6,182,694 B1 | 2/2001 | Sievers et al. |
| D333,178 S | 2/1993 | Novy | 6,189,560 B1 | 2/2001 | Reynolds |
| 5,190,224 A | 3/1993 | Hamilton | 6,199,919 B1 | 3/2001 | Kawasaki et al. |
| 5,222,279 A | 6/1993 | Frano et al. | 6,221,064 B1 | 4/2001 | Nadal |
| 5,228,724 A | 7/1993 | Godeau | 6,231,089 B1 | 5/2001 | DeCler et al. |
| 5,232,020 A | 8/1993 | Mason et al. | D444,054 S | 6/2001 | Bernard et al. |
| D339,417 S | 9/1993 | Sampson et al. | 6,257,626 B1 | 7/2001 | Campau |
| 5,316,041 A | 5/1994 | Ramacier, Jr. et al. | 6,261,282 B1 | 7/2001 | Jepson et al. |
| 5,330,235 A | 7/1994 | Wagner et al. | 6,293,596 B1 | 9/2001 | Kinder |
| 5,356,183 A | 10/1994 | Cole | 6,302,147 B1 | 10/2001 | Rose et al. |
| 5,374,088 A | 12/1994 | Moretti et al. | 6,318,764 B1 | 11/2001 | Trede et al. |
| 5,385,311 A | 1/1995 | Morikawa et al. | 6,344,033 B1 | 2/2002 | Jepson et al. |
| 5,385,331 A | 1/1995 | Allread et al. | D459,206 S | 6/2002 | Caveney et al. |
| D357,307 S | 4/1995 | Ramacier, Jr. et al. | 6,402,207 B1 | 6/2002 | Segal et al. |
| 5,405,339 A | 4/1995 | Kohnen et al. | 6,423,053 B1 | 7/2002 | Lee |
| 5,405,340 A | 4/1995 | Fageol et al. | 6,481,759 B1 | 11/2002 | Kawasaki et al. |
| 5,437,650 A | 8/1995 | Larkin et al. | 6,485,483 B1 | 11/2002 | Fujii |
| 5,494,074 A | 2/1996 | Ramacier, Jr. et al. | 6,505,866 B1 | 1/2003 | Nakamura et al. |
| 5,507,733 A | 4/1996 | Larkin et al. | 6,508,807 B1 * | 1/2003 | Peters 604/533 |
| D372,093 S | 7/1996 | Sampson et al. | 6,520,546 B2 | 2/2003 | Szabo |
| 5,536,258 A | 7/1996 | Folden | D471,261 S | 3/2003 | Kozu |
| 5,547,166 A | 8/1996 | Engdahl | 6,540,263 B1 | 4/2003 | Sausner |
| 5,553,895 A | 9/1996 | Karl et al. | 6,595,964 B2 | 7/2003 | Finley et al. |
| D375,160 S | 10/1996 | Sampson et al. | 6,612,634 B1 | 9/2003 | Zoppas |

US D630,320 S

| | | | | | |
|--------------|---------|----------------------------|-----------------|---------|------------------------------|
| 6,626,465 B2 | 9/2003 | Lacroix et al. | 7,108,297 B2 | 9/2006 | Takayanagi et al. |
| 6,641,177 B1 | 11/2003 | Pinciario | 7,128,348 B2 | 10/2006 | Kawamura et al. |
| 6,649,829 B2 | 11/2003 | Garber et al. | 7,137,654 B2 | 11/2006 | Segal et al. |
| 6,652,007 B1 | 11/2003 | Hwang | 7,147,252 B2 | 12/2006 | Teuscher et al. |
| D484,241 S * | 12/2003 | Peters et al. D24/129 | 7,153,296 B2 | 12/2006 | Mitchell |
| 6,669,681 B2 | 12/2003 | Jepson et al. | D540,944 S * | 4/2007 | Guala D24/129 |
| 6,676,172 B2 | 1/2004 | Alksnis | D550,355 S | 9/2007 | Racz et al. |
| D486,909 S * | 2/2004 | Cise et al. D24/129 | D557,409 S * | 12/2007 | Veliss et al. D24/110.1 |
| 6,688,654 B2 | 2/2004 | Romero | D569,955 S | 5/2008 | Chen |
| 6,692,038 B2 | 2/2004 | Braun | D570,457 S | 6/2008 | Brown |
| 6,722,705 B2 | 4/2004 | Korkor | 7,390,029 B2 | 6/2008 | Matsubara |
| D495,050 S * | 8/2004 | Guala D24/129 | 7,434,842 B2 | 10/2008 | Schmidt |
| 6,783,520 B1 | 8/2004 | Candray et al. | 7,467,813 B2 | 12/2008 | Gunderson |
| 6,799,747 B1 | 10/2004 | Lai | 7,547,047 B2 | 6/2009 | deCler et al. |
| 6,840,277 B1 | 1/2005 | Nimberger | D595,846 S * | 7/2009 | Racz et al. D24/129 |
| 6,848,723 B2 | 2/2005 | Lamich | D596,739 S * | 7/2009 | Ng et al. D24/110.1 |
| 6,863,314 B2 | 3/2005 | Guest | 7,562,906 B2 | 7/2009 | Schmidt |
| 6,871,878 B2 | 3/2005 | Miros | 7,647,954 B2 | 1/2010 | Garber et al. |
| D503,778 S | 4/2005 | Wicks | 7,677,608 B2 | 3/2010 | Takayanagi |
| 6,886,803 B2 | 5/2005 | Mikiya et al. | D613,853 S * | 4/2010 | Ng et al. D24/110.1 |
| 6,897,374 B2 | 5/2005 | Garber et al. | 2004/0232696 A1 | 11/2004 | Andre |
| 6,899,315 B2 | 5/2005 | Maiville et al. | 2005/0057042 A1 | 3/2005 | Wicks |
| 6,929,246 B2 | 8/2005 | Arzenton et al. | 2005/0082828 A1 | 4/2005 | Wicks et al. |
| 6,945,273 B2 | 9/2005 | Reid | 2007/0029796 A1 | 2/2007 | Bibby |
| 6,949,084 B2 | 9/2005 | Marggi et al. | 2007/0169825 A1 | 7/2007 | Packham et al. |
| 6,997,919 B2 | 2/2006 | Olsen et al. | 2007/0209716 A1 | 9/2007 | Rankin |
| 7,005,581 B2 | 2/2006 | Burnette | 2008/0277924 A1 | 11/2008 | Jensen et al. |
| 7,011,342 B2 | 3/2006 | Guivarc'h et al. | 2009/0256355 A1 | 10/2009 | Wicks et al. |
| D522,109 S | 5/2006 | White et al. | 2010/0001516 A1 | 1/2010 | Pisula, Jr. et al. |
| 7,044,161 B2 | 5/2006 | Tiberghien | | | |
| 7,044,506 B2 | 5/2006 | Dong | | | |

* cited by examiner

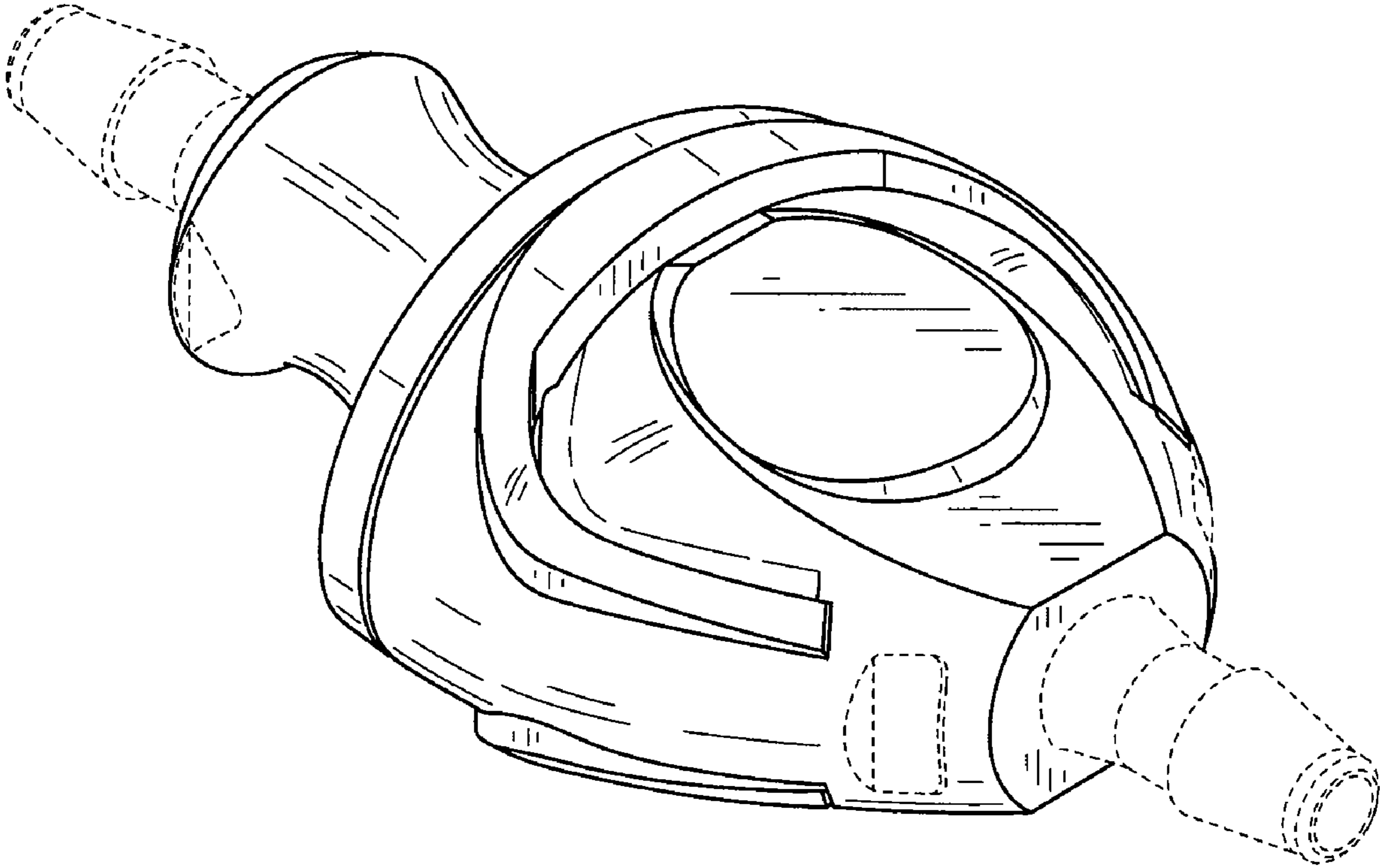


FIG.1

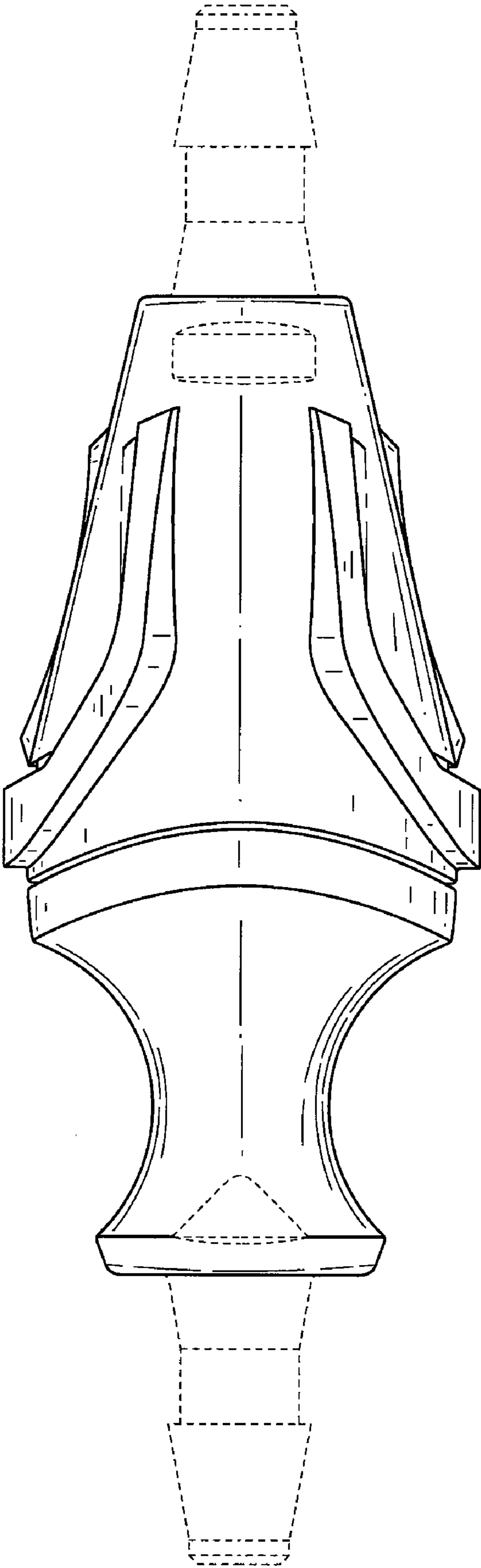


FIG.2

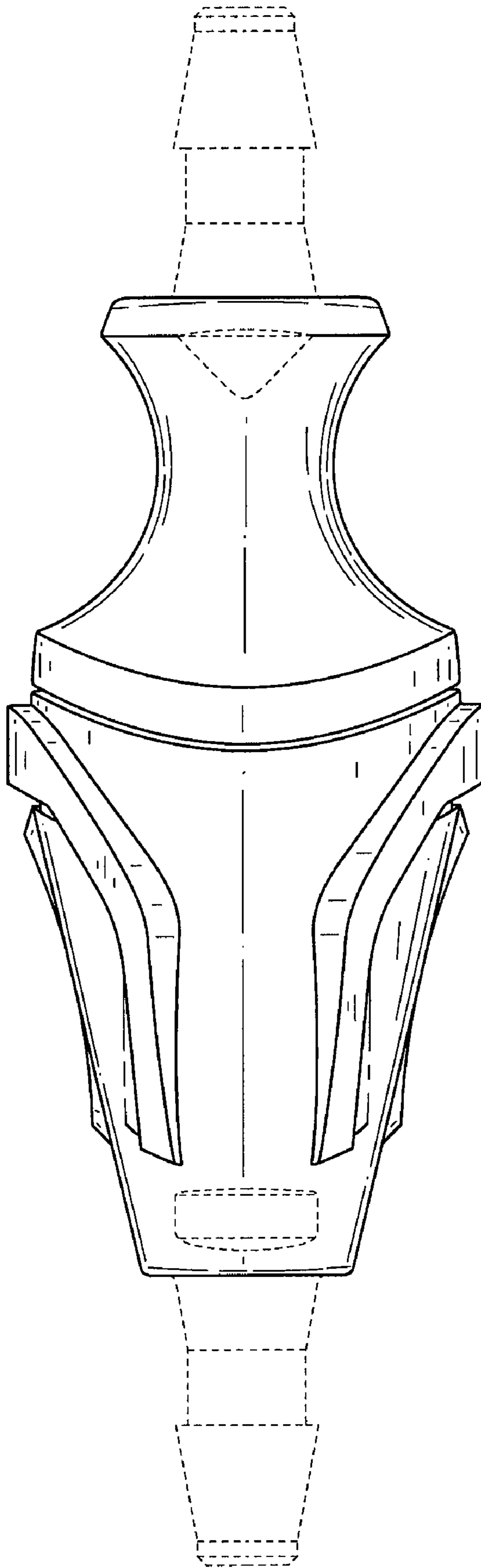


FIG.3

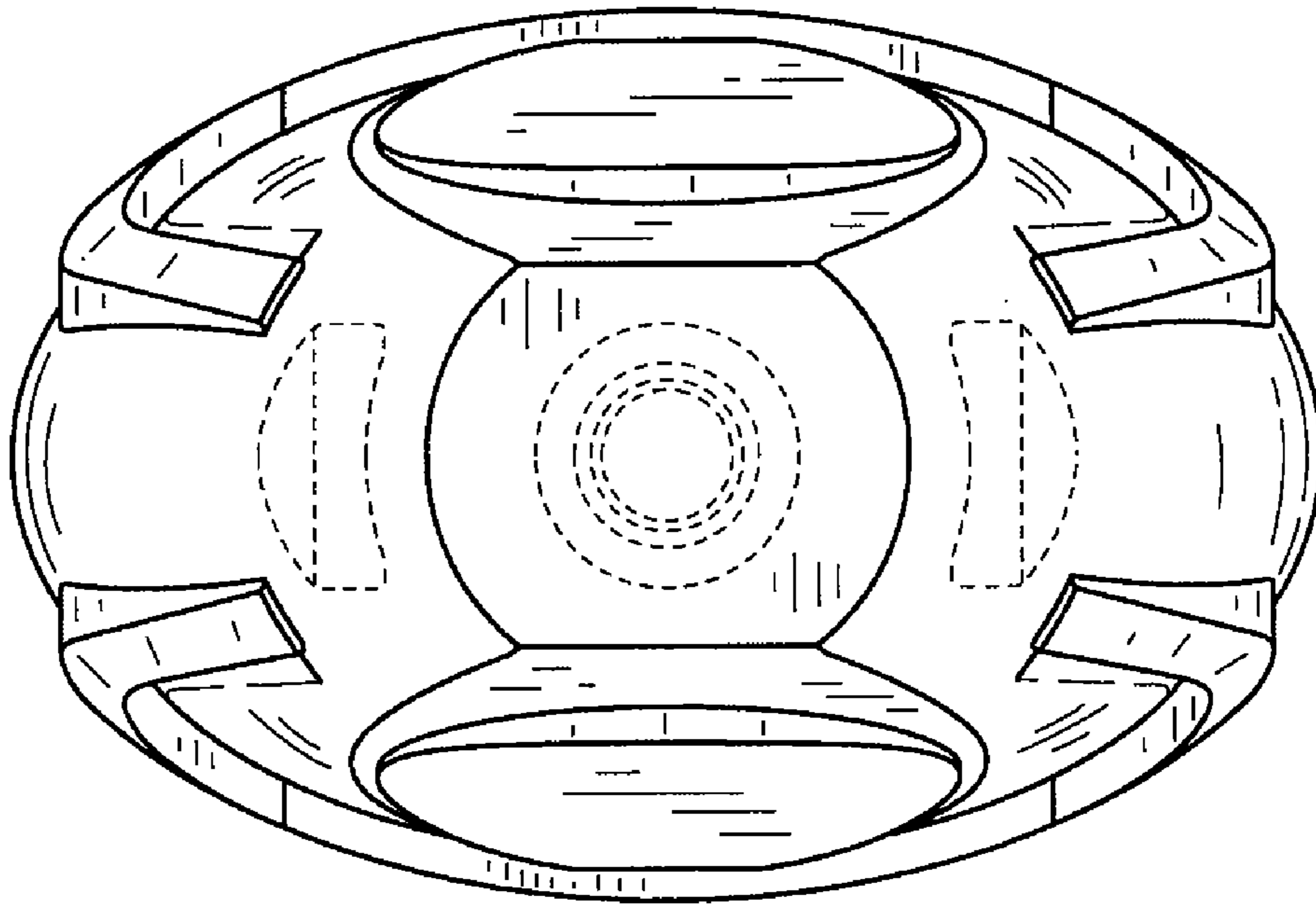


FIG. 4

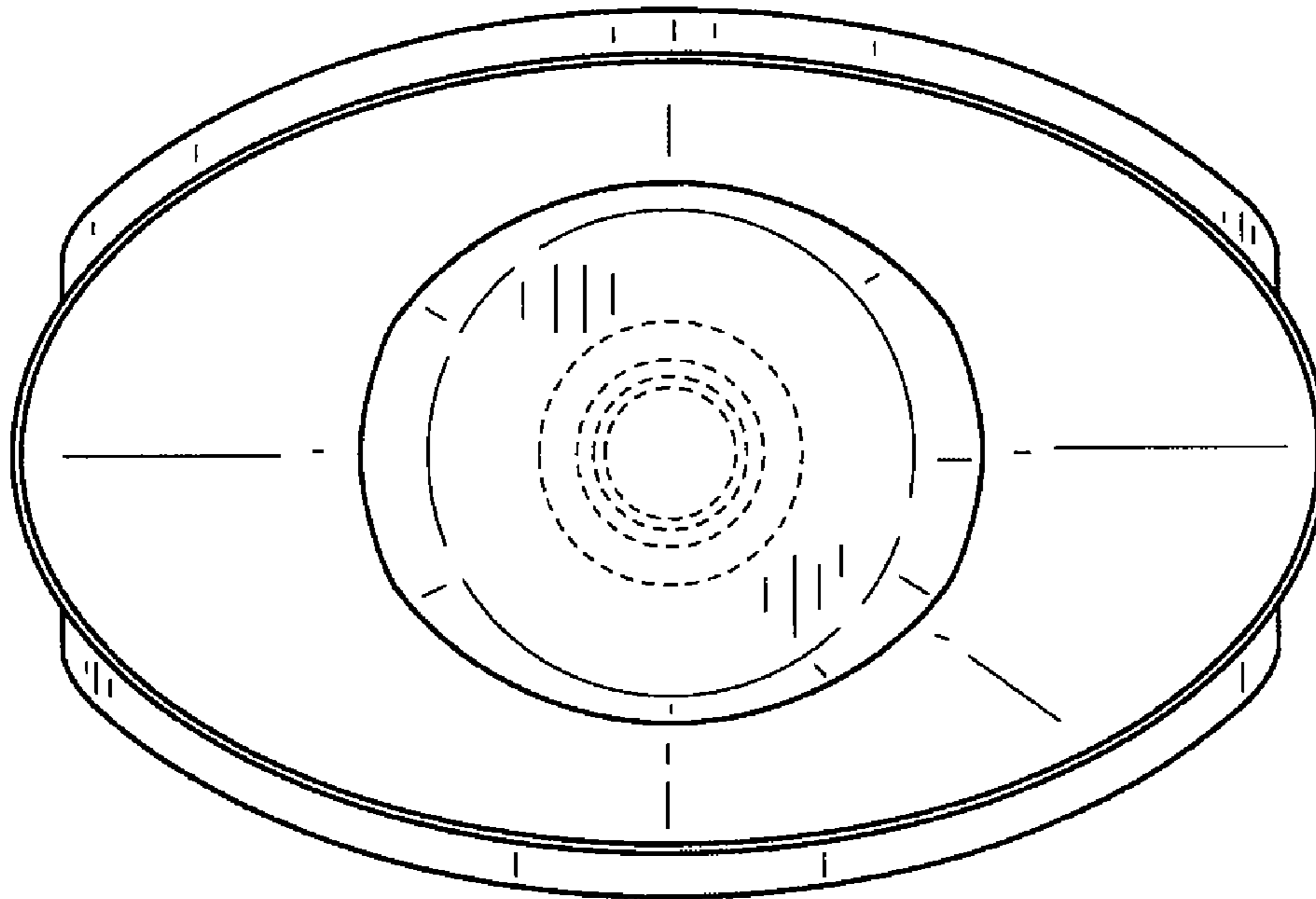


FIG. 5

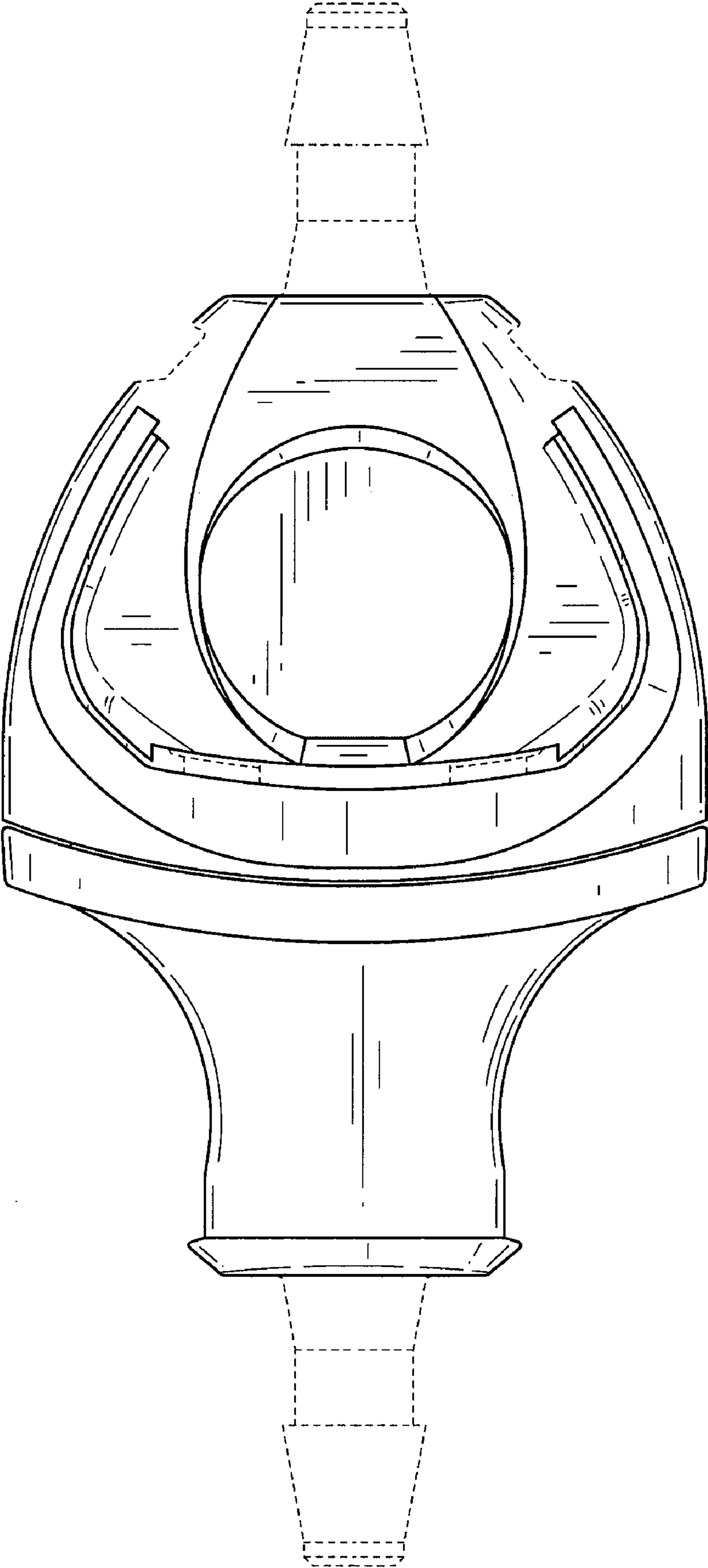


FIG.6

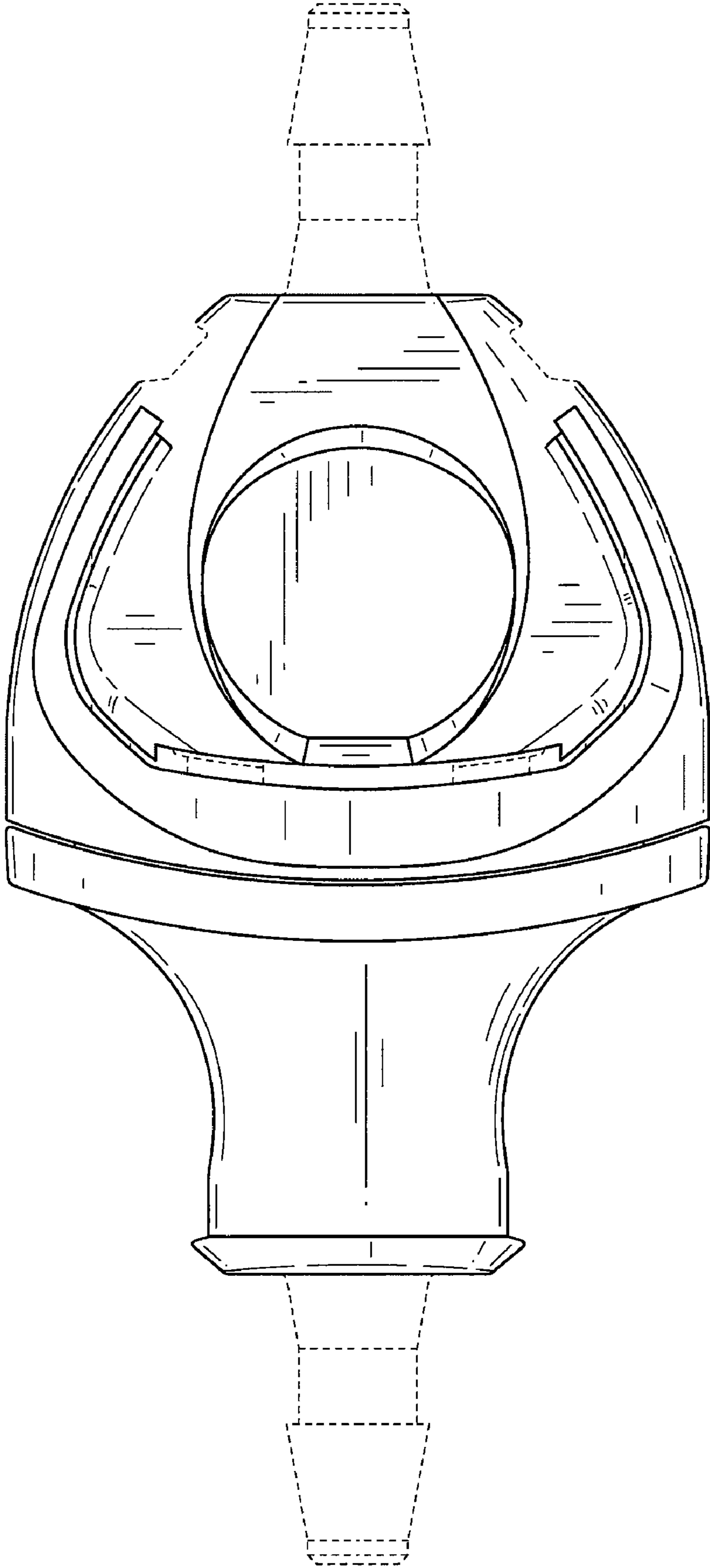


FIG.7