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(12) **United States Design Patent** (10) **Patent No.:** **US D861,758 S**  
**Severance, Jr. et al.** (45) **Date of Patent:** **\*\* Oct. 1, 2019**

(54) **VENTED PLASMA CUTTING ELECTRODE**  
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D399,793 S \* 10/1998 Lee ..... D12/114  
5,841,095 A 11/1998 Lu et al.  
5,886,315 A 3/1999 Lu et al.  
5,977,510 A 11/1999 Lindsay et al.  
5,994,663 A 11/1999 Lu  
6,020,572 A 2/2000 Marner et al.  
6,066,827 A 5/2000 Nemchinsky  
D427,668 S \* 7/2000 Stout, Jr. .... D23/262  
6,084,199 A 7/2000 Lindsay et al.

(Continued)

**FOREIGN PATENT DOCUMENTS**

DE 102004049445 A1 4/2006  
DE 202006018163 U1 3/2007

(Continued)

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D8/88, 106, 300, 309, 343; D15/122,  
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1/42  
See application file for complete search history.

(57) **CLAIM**

The ornamental design for a vented plasma cutting electrode, as shown and described.

**DESCRIPTION**

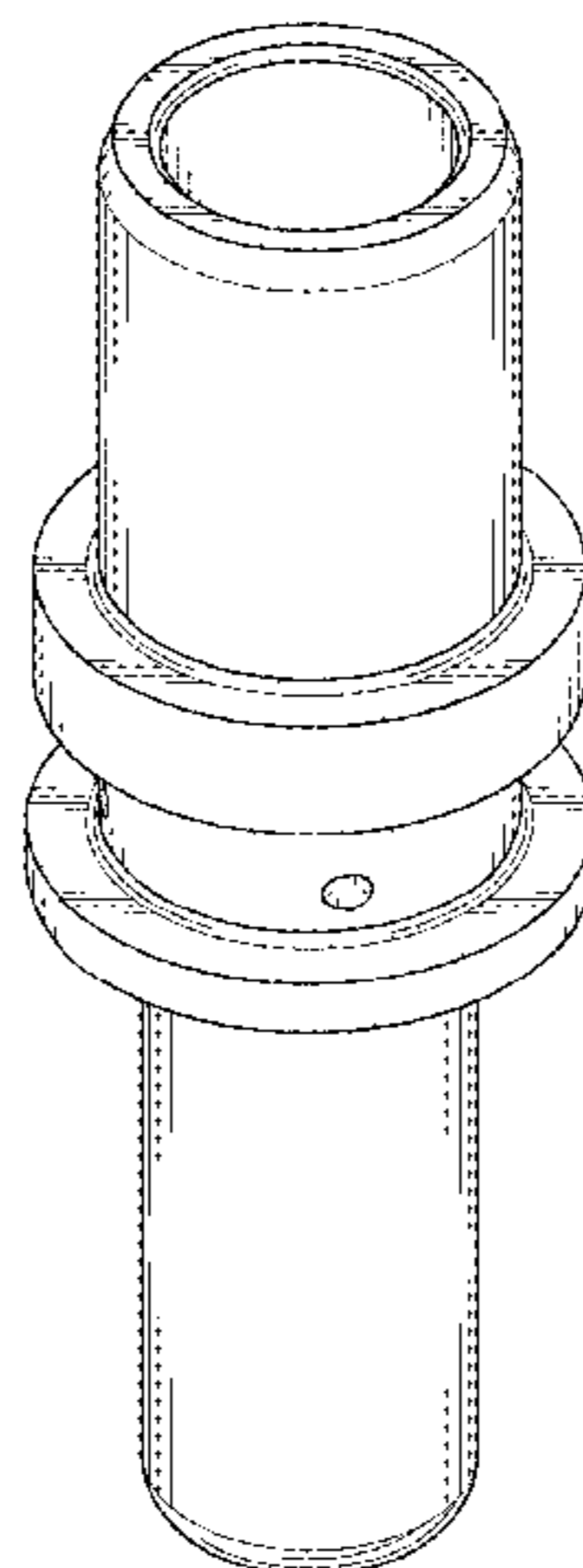
FIG. 1 is perspective view of a design for a vented plasma cutting electrode.  
FIG. 2 is a top view of a design for the vented plasma cutting electrode.  
FIG. 3 is a bottom view of a design for the vented plasma cutting electrode.  
FIG. 4 is a side view of a design for the vented plasma cutting electrode.  
FIG. 5 is another side view of a design for the vented plasma cutting electrode.  
FIG. 6 is a further side view of a design for the vented plasma cutting electrode; and,  
FIG. 7 is an additional side view of a design for the vented plasma cutting electrode.

**1 Claim, 3 Drawing Sheets**

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,861,962 A 8/1989 Sanders  
4,967,055 A 10/1990 Raney et al.  
D362,860 S \* 10/1995 Carkhuff ..... D15/144  
5,464,962 A 11/1995 Luo et al.  
5,601,734 A 2/1997 Luo et al.  
5,660,743 A 8/1997 Nemchinsky  
D384,682 S \* 10/1997 Tumer ..... D15/144  
5,695,662 A 12/1997 Couch, Jr. et al.  
5,747,767 A 5/1998 Severance et al.  
5,756,959 A 5/1998 Freeman et al.  
5,767,478 A 6/1998 Walters



(56)

References Cited

U.S. PATENT DOCUMENTS

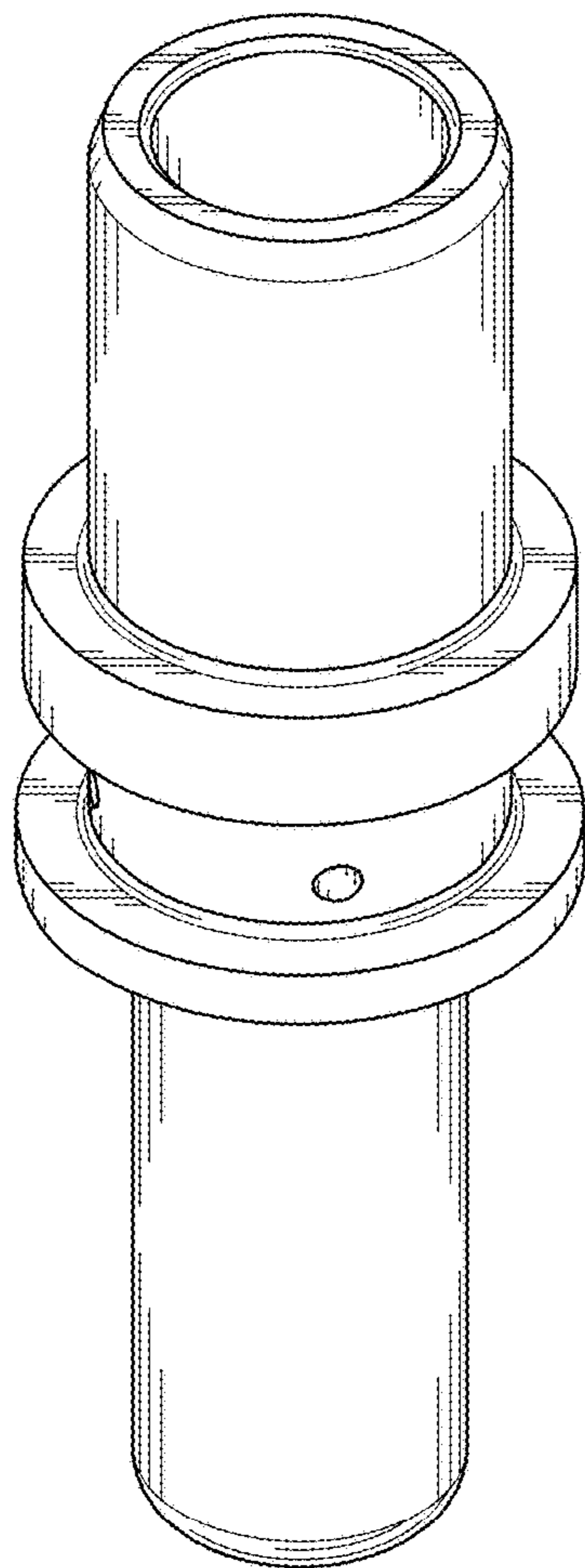
6,114,650 A 9/2000 Marner et al.  
 6,130,399 A 10/2000 Lu et al.  
 6,163,008 A 12/2000 Roberts  
 6,207,923 B1 3/2001 Lindsay et al.  
 6,403,915 B1 6/2002 Cook et al.  
 6,423,922 B1 7/2002 Nemchinsky et al.  
 6,424,082 B1 7/2002 Hackett et al.  
 6,452,130 B1 9/2002 Qian et al.  
 6,483,070 B1 11/2002 Diehl et al.  
 6,614,001 B2 9/2003 Hackett et al.  
 6,686,559 B1 2/2004 Walters et al.  
 D493,214 S \* 7/2004 Snyder, Sr. .... D23/262  
 6,841,754 B2 1/2005 Cook et al.  
 6,946,617 B2 9/2005 Brandt et al.  
 6,969,819 B1 11/2005 Griffin et al.  
 7,019,255 B2 3/2006 Brandt et al.  
 7,081,597 B2 7/2006 Severance, Jr. et al.  
 7,193,174 B2 3/2007 Brandt et al.  
 7,256,366 B2 8/2007 Severance et al.  
 7,375,302 B2 5/2008 Twarog et al.  
 7,375,303 B2 5/2008 Twarog et al.  
 7,423,235 B2 9/2008 Severance, Jr. et al.  
 7,435,925 B2 10/2008 Griffin et al.  
 7,598,473 B2 10/2009 Cook et al.  
 7,605,340 B2 10/2009 Duan et al.  
 7,659,488 B2 2/2010 Cook et al.  
 7,754,993 B2 7/2010 Ortega et al.  
 7,829,816 B2 11/2010 Duan et al.  
 D643,864 S \* 8/2011 Jackson ..... D15/140  
 7,989,727 B2 8/2011 Twarog et al.  
 8,035,055 B2 10/2011 Twarog et al.  
 8,089,025 B2 1/2012 Sanders et al.  
 8,097,828 B2 1/2012 Roberts et al.  
 8,101,882 B2 1/2012 Mather et al.  
 D654,104 S 2/2012 Fitzpatrick et al.  
 8,115,136 B2 2/2012 Mather et al.  
 8,153,927 B2 4/2012 Twarog et al.  
 D662,528 S \* 6/2012 Brown ..... D15/136  
 8,212,173 B2 7/2012 Liebold et al.  
 8,304,684 B2 11/2012 Currier et al.  
 8,338,740 B2 12/2012 Liebold et al.  
 8,389,887 B2 3/2013 Liebold et al.  
 8,395,077 B2 3/2013 Duan et al.  
 D686,306 S \* 7/2013 Grether ..... D23/264  
 8,525,069 B1 9/2013 Mather et al.  
 8,541,712 B2 9/2013 Mather et al.  
 D692,402 S 10/2013 Dalton et al.  
 D692,471 S \* 10/2013 Minonishi ..... D15/144  
 8,546,718 B2 10/2013 Mather et al.  
 8,546,719 B2 10/2013 Warren, Jr. et al.  
 8,581,139 B2 11/2013 Severance, Jr. et al.  
 8,633,417 B2 1/2014 Ashtekar et al.

D702,654 S \* 4/2014 Lee ..... D13/182  
 8,698,036 B1 4/2014 Zhang et al.  
 8,759,709 B2 6/2014 Mather et al.  
 8,772,667 B2 7/2014 Yang et al.  
 8,829,385 B2 9/2014 Yang et al.  
 D719,200 S \* 12/2014 Hassan ..... D15/144  
 D720,051 S \* 12/2014 Dole ..... D23/266  
 D728,649 S \* 5/2015 Hassan ..... D15/144  
 D733,776 S \* 7/2015 Buttiker ..... H01T 13/02  
 D15/144  
 D744,324 S \* 12/2015 Hyakutake ..... D8/382  
 D748,173 S \* 1/2016 Hassan ..... D15/144  
 D748,174 S \* 1/2016 Hassan ..... D15/144  
 D759,137 S \* 6/2016 Hassan ..... D15/144  
 D776,177 S \* 1/2017 Namburu ..... D15/144  
 D777,812 S \* 1/2017 Namburu ..... D15/144  
 D784,497 S \* 4/2017 Vaz ..... D23/262  
 D790,053 S \* 6/2017 Querrey ..... D23/393  
 D802,034 S \* 11/2017 Yamaguchi ..... D15/144  
 D811,558 S \* 2/2018 Howson ..... D23/261  
 D813,278 S \* 3/2018 Savill, Jr. .... D15/144  
 D822,081 S \* 7/2018 Yamaguchi ..... D15/140  
 D836,755 S \* 12/2018 Dale ..... D23/259  
 D839,400 S \* 1/2019 Wolff ..... D23/262  
 D841,782 S \* 2/2019 Wada ..... D23/260  
 D844,525 S \* 4/2019 Villamizar ..... D12/207  
 D844,526 S \* 4/2019 Villamizar ..... D12/207  
 D845,161 S \* 4/2019 Lenk ..... D10/101  
 D846,009 S \* 4/2019 Takemura ..... D15/144  
 2002/0185475 A1 12/2002 Horner-Richardson et al.  
 2004/0169018 A1 9/2004 Brasseur et al.  
 2006/0163216 A1 7/2006 Brandt et al.  
 2012/0012560 A1 1/2012 Roberts et al.  
 2012/0145680 A1 6/2012 Warren  
 2013/0043224 A1 2/2013 Leiteritz et al.  
 2013/0306607 A1 11/2013 Mather et al.  
 2014/0021175 A1 1/2014 Chen et al.  
 2014/0110382 A1 4/2014 Beliveau et al.  
 2015/0351214 A1 12/2015 Patel  
 2016/0050740 A1 2/2016 Zhang  
 2016/0219688 A1 7/2016 Carletti et al.

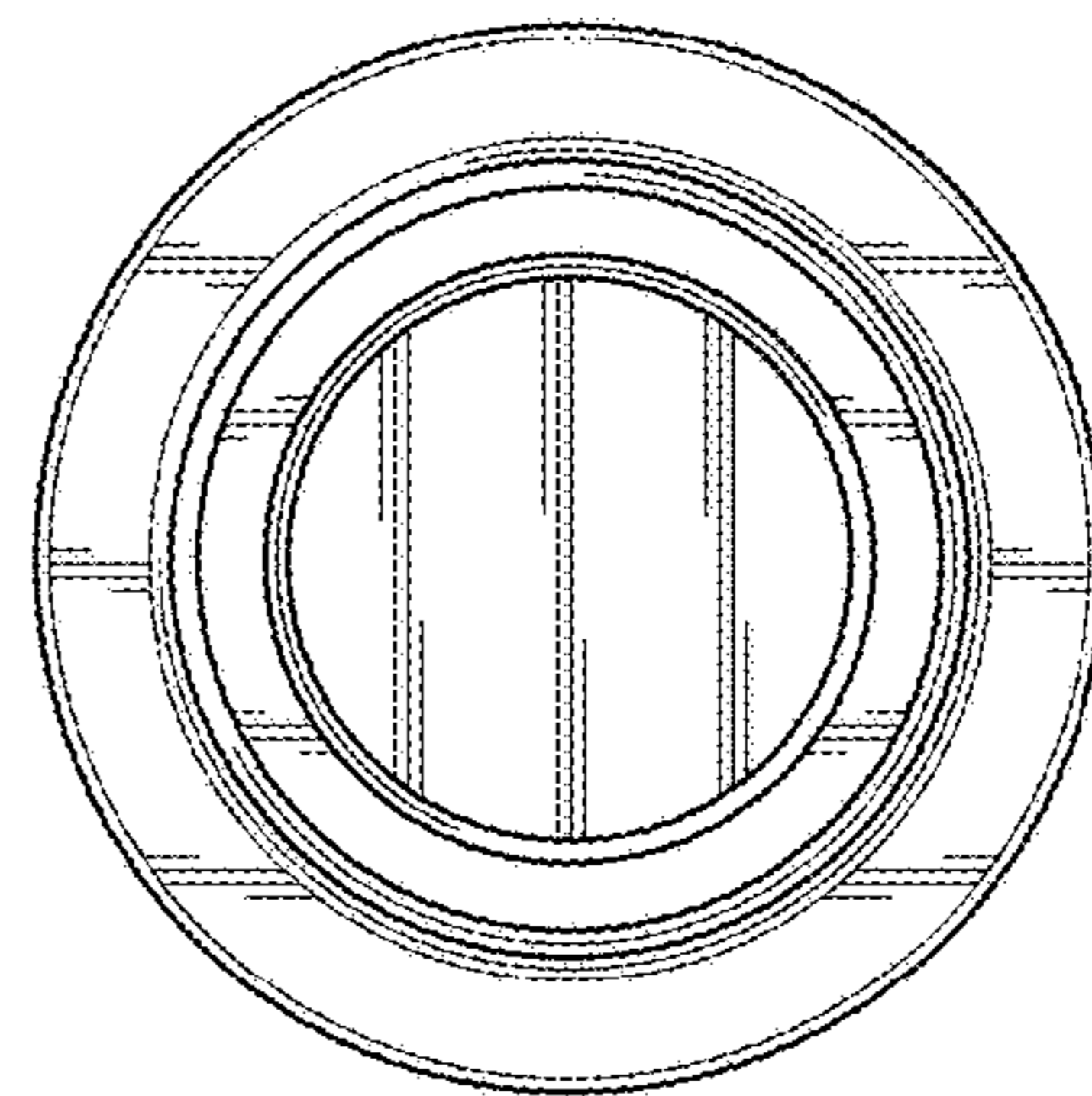
FOREIGN PATENT DOCUMENTS

EP 0729805 A1 4/1996  
 EP 0790756 A2 8/1997  
 WO 1999053734 A1 10/1999  
 WO 200028794 A1 5/2000  
 WO 2006113737 A2 10/2006  
 WO 2008101226 A1 2/2008  
 WO 2010111695 A1 9/2010  
 WO 2012118826 A1 9/2012  
 WO 2014187438 A1 11/2014

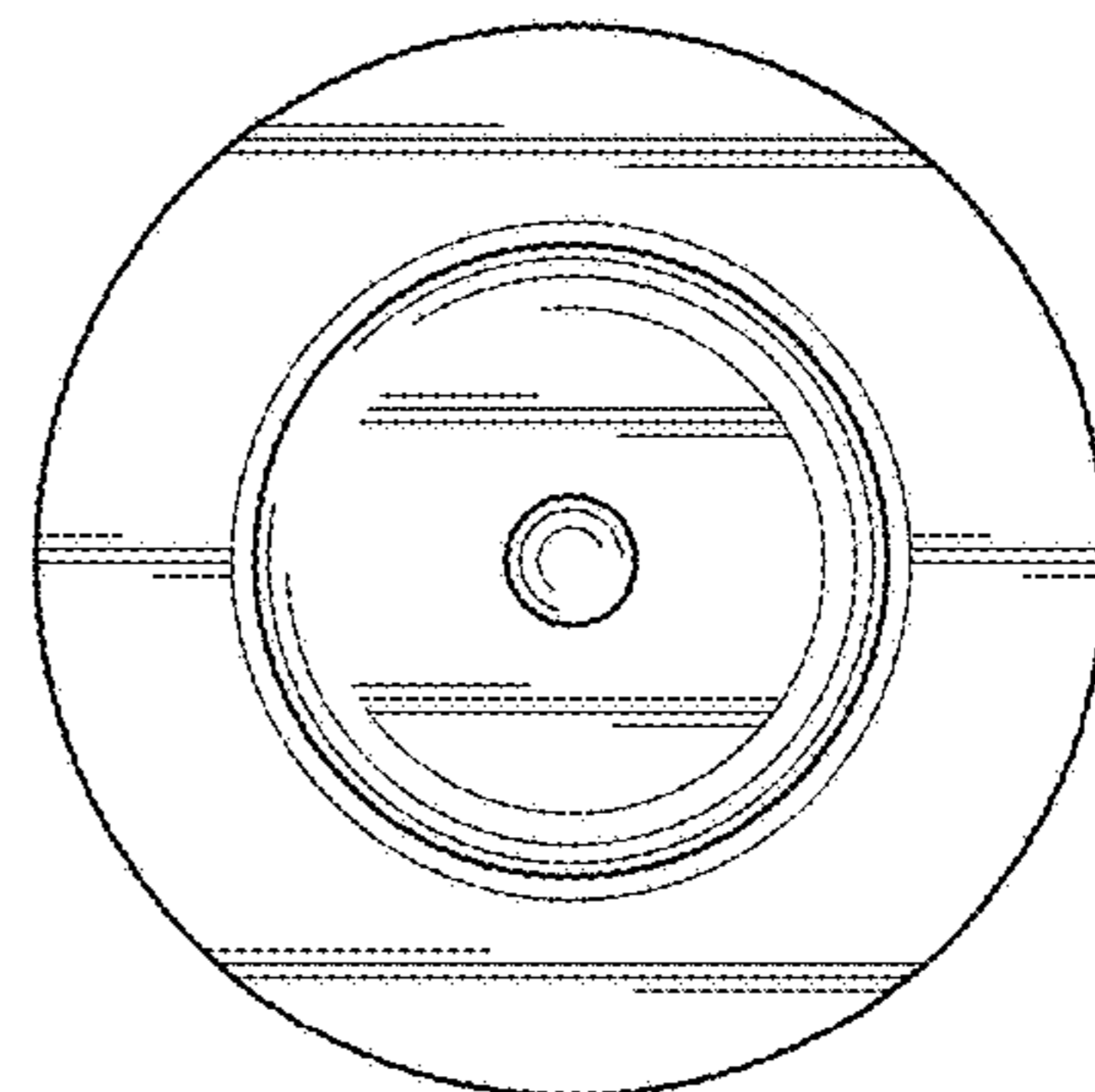
\* cited by examiner



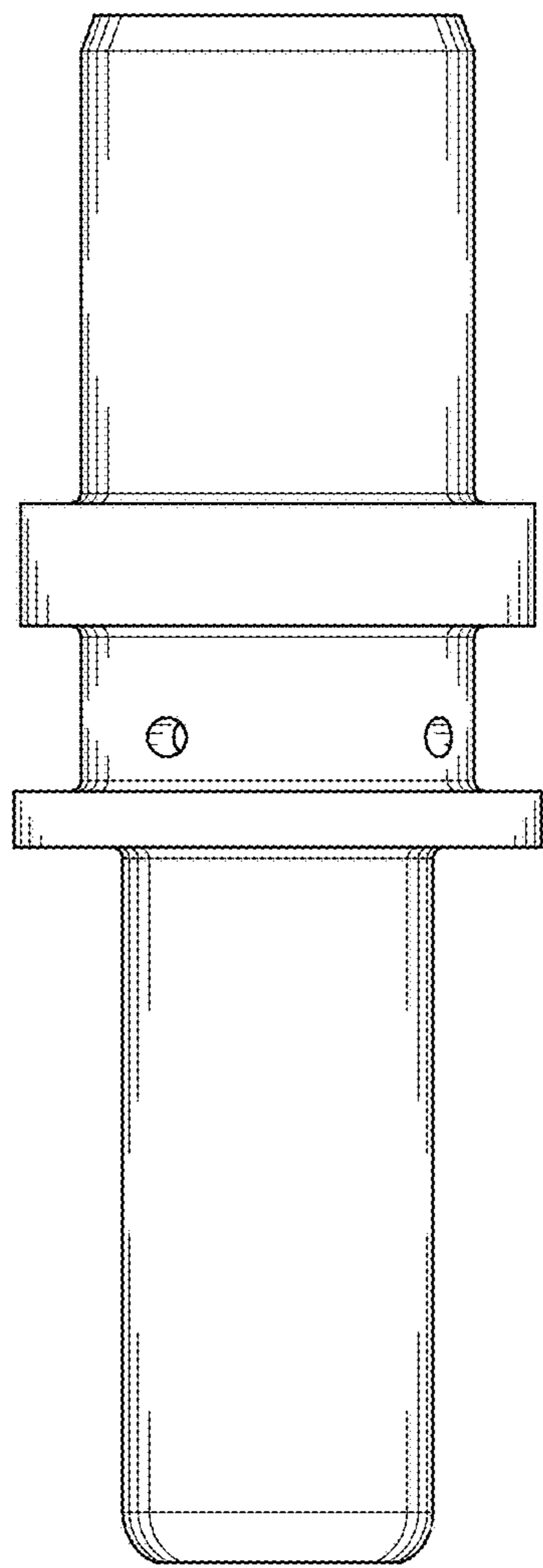
**FIG. 1**



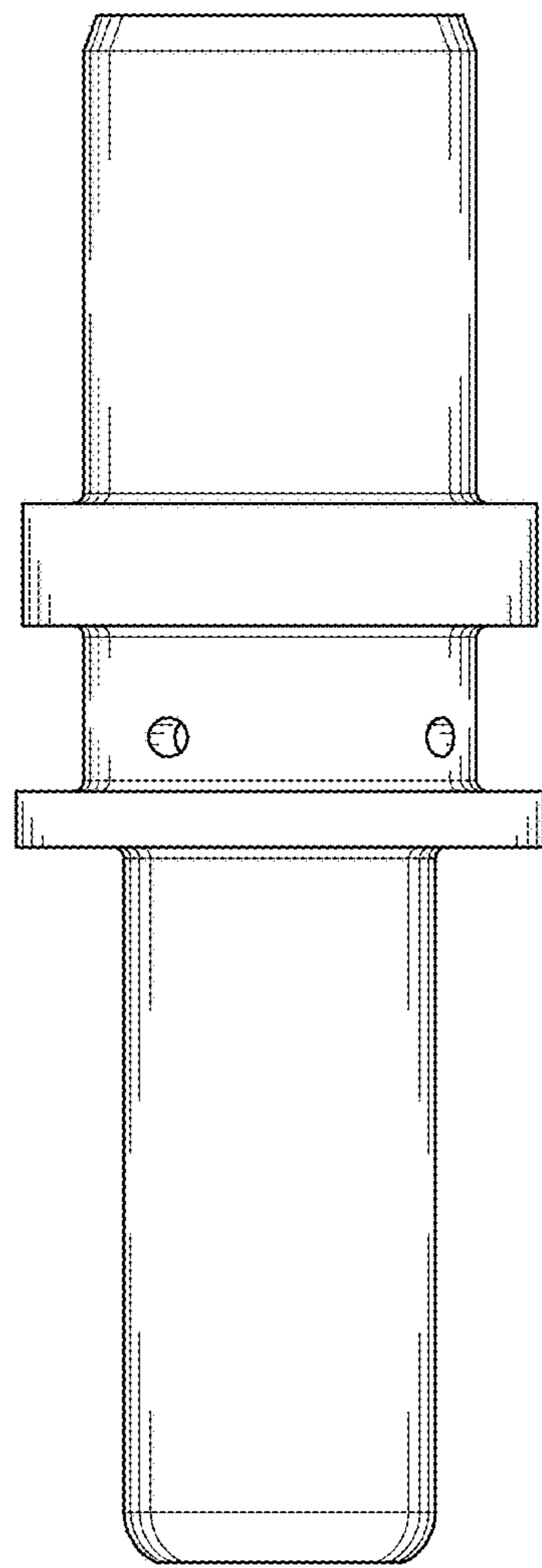
**FIG. 2**



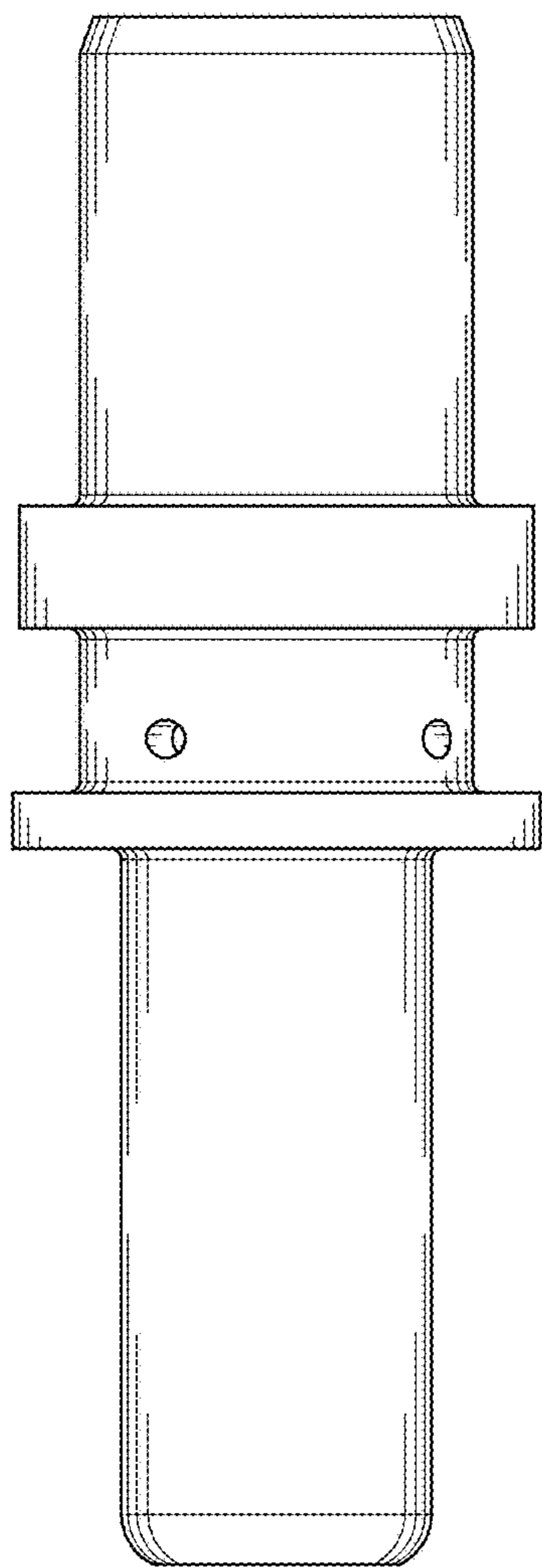
**FIG. 3**



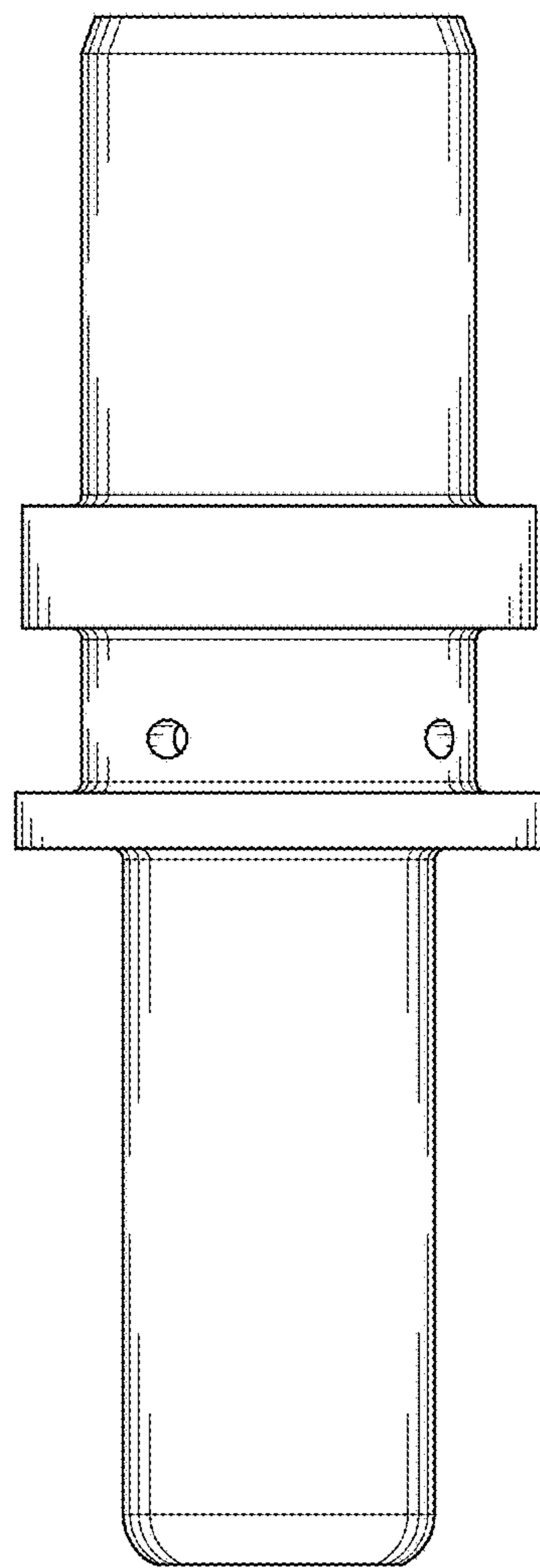
**FIG. 4**



**FIG. 5**



**FIG. 6**



**FIG. 7**